

LITTON INDUSTRIES, AIRTRON DIVISION
200 EAST HANOVER AVENUE
HANOVER TOWNSHIP, MORRIS COUNTY, NEW JERSEY
EPA ID NO. NJD030239412

GENERAL INFORMATION AND SITE HISTORY

Litton Industries, Airtron Division (Airtron) operates a facility engaged in metal plating for microwave components and the manufacturing of gem crystals. This facility is located on a 18.8 acre tract at 200 East Hanover Avenue, Hanover Township, Morris County, Block 601, Lot 1. Cresticon, a holding company for Litton Industries, is the owner of the property and the facility. The facility is located in an industrial area. South of the site is the location of the Mennen warehouse. West of the site is the Mennen manufacturing facility and the Mennen Sports Arena. Northwest of the site is the Champion facility. North of the site is an undeveloped wooded area. East of the site is a tributary to the Whippany River. The nearest residence is located approximately 1,100 feet south of the site. The population within a 4 mile radius of the site is approximately 74,000.

The Airtron facility has been in operation since 1952. Prior to 1952 the facility was owned by Monroe Industries who manufactured calculators.

SITE OPERATIONS

Airtron uses mostly aluminum as well as some beryllium, copper, cadmium, chromium, lead, mercury, silver and zinc for its plating operations. Crystals are manufactured from many rare earth metals including gallium. Airtron uses solvents and degreasers such as methanol, methyl ethyl ketone, isopropyl alcohol, chromic acid, sulfuric acid, nitric acid, hydrofluoric acid and muriatic acid in its manufacturing processes.

Most of the raw materials are stored in drums on a concrete pad outdoors. Hydrogen, fluorine and oxygen gases are stored in pressurized bottles in the facility's laboratory.

Two aboveground storage tanks, one storing 500 gallons of liquid argon and one storing 1,000 gallons of liquid nitrogen are located northeast of the manufacturing building. A 10,000 gallon underground storage tank containing heating oil No. 6 is located southeast of the manufacturing building. Airtron anticipates removing the underground storage tank in the spring of 1990.

Wastewaters generated from the manufacturing processes are treated via an on-site wastewater treatment plant. Treatment of these wastewaters involves neutralization, flocculation, clarification, settling and filtration. The treated wastewater is discharged into a tributary of the Whippany River.

Sludges are generated from the wastewater treatment process. The sludges contain several metals including arsenic, cadmium, chromium, copper, lead, mercury, silver and zinc. The sludge is packed in polyethylene bags and is stored on a concrete pad outdoors. Waste solvents such as methanol, methyl ethyl ketone, toluene, still bottoms from vapor degreasers and spent freon are stored in drums on the unbermed concrete pad. These drums and the polyethylene bags are stored for less than 90 days prior to being disposed off site. In 1988, 84,740 pounds of sludge, 1,141 gallons of

waste solvents, 165 gallons of waste oil and 10 gallons of an unspecified liquid were removed from the facility for disposal. Airtron is registered with the USEPA as a hazardous waste generator (EPA ID.No. NJD049616832).

From 1963 until 1979 sludges generated from the wastewater treatment process were disposed of in five on-site sludge drying beds. These beds were approximately 5 feet long, 4 feet wide and 5 feet deep. In 1963, the New Jersey State Department of Health (NJDOH) issued Airtron a permit to construct and operate the wastewater treatment plant and two sludge drying beds for the temporary storage of sludge. Pursuant to an Administrative Order issued in December 1979 by the NJDEP, Division of Water Resources (DWR), Airtron removed the sludge from the drying beds and some of the contaminated soils. Soil and groundwater contamination still exist within the vicinity of the former sludge drying beds.

On December 14, 1979, the NJDEP, DWR issued an Administrative Order to Airtron for violating its permit to construct and operate its industrial wastewater treatment facility which included the two sludge drying beds. Specifically, Airtron constructed and operated three additional sludge drying beds without obtaining a treatment works approval, failed to properly operate all of the sludge drying beds so that the sludge would dry, failed to remove the sludge from the beds and discharged materials not approved by either the NJDOH or the NJDEP into the sludge drying beds. In December 1980 Airtron removed the sludge from the drying beds and 12 inches of soil from the bottom and the sides of the drying beds. Sampling results from Airtron's monitoring wells and soil samples collected from 1980 to the present confirm that the sludge drying beds were the a source of groundwater and soil contamination with volatile organic compounds (VOCs).

In 1976, the USEPA issued Airtron a National Pollutant Discharge Elimination System (NPDES) Discharge to Surface Water (DSW) permit No. NJ0025739 to Airtron for its discharge of treated wastewater to a tributary of the Whippany River via Discharge Serial Number 001 (DSN001). Airtron was later issued a New Jersey Pollutant Discharge Elimination System (NJPDDES) Discharge to Surface Water Permit for the discharge addressed in the NPDES permit in addition to a storm water discharge to a tributary of the Whippany River via DSN002. The effective date of the NJPDDES permit was May 1, 1985 and the expiration date is April 30, 1990.

On October 1, 1989 Airtron was issued a NJPDDES Discharge to Groundwater (DGW) permit requiring Airtron to perform additional groundwater sampling. The permit also required Airtron to maintain hydraulic control of the groundwater contamination through the use of a groundwater recovery system. Pursuant to this permit, Airtron is required to sample its monitoring wells for trichloroethylene, tetrachloroethylene, trans-1,2-dichloroethylene, 1,1-dichloroethylene and 1,1,1-trichloroethane. The permit requires that Airtron comply with Groundwater Protection Standards promulgated by the NJDEP for trichloroethylene, tetrachloroethylene and trans-1,2-dichloroethylene for groundwater quality underlying the site. On October 26, 1989 Airtron requested an adjudicatory hearing on the NJPDDES groundwater permit. In its request, Airtron challenged the NJDEP's authority to issue a NJPDDES/DGW permit without receiving an application for a NJPDDES/DGW permit. Airtron challenged the NJDEP's authority to require Airtron to take control over the pumping rate of Mennen's supply well (Men-1), one of the required

options to maintain the hydraulic control of the contaminated groundwater. Airtron also objected to being required to maintain hydraulic control of the contaminated groundwater when there appears to be an additional source of groundwater contamination within the vicinity, specifically the Mennen facility. In addition, the permit required the installation of eight additional monitoring wells. Airtron installed all eight monitoring wells by December 22, 1989.

On December 31, 1985; October 17, 1986; November 5, 1987 and June 8, 1988 the Airtron facility received unacceptable ratings based on NJPDES Compliance Evaluation Inspections (CEIs) conducted by the NJDEP, Division of Water Resources, Bureau of Northern Enforcement (BNE). These inspections cited numerous effluent limitation violations for arsenic, fluoride, methylene chloride, cyanide and total volatile organics discharged to the tributary of the Whippany River.

On November 22, 1989 the Airtron facility was rated conditionally acceptable based on a CEI conducted on June 27, 1989 by the NJDEP, DWR, BNE. The inspection cited a discharge violation, specifically the exceedence of the VOC permit limitation in June 1988.

In 1980 Airtron submitted a RCRA Part A application for a Hazardous Waste Facility Permit. On March 3, 1983 the NJDEP, Division of Hazardous Waste Management (DHWM) deleted Airtron's Part A interim status since Airtron was storing its drums at its facility under 90 days, and therefore, was exempt from RCRA requirements.

Airtron has been issued 25 Air Pollution Control Permits (Plant ID No. 25136) by the NJDEP, Division of Environmental Quality (DEQ). The permits were issued for air emissions from its manufacturing processes and for vents from a 10,000 gallon underground storage tank (UST) containing fuel.

During a Presampling Assessment (PSA) conducted on December 20, 1989 by the NJDEP, DHWM, Bureau of Planning and Assessment, it was noted that the concrete slab where the hazardous wastes were stored was heavily stained and several drums were corroded. The storage area is not bermed nor does it include a collection system for spills.

GROUNDWATER ROUTE

The Airtron site is located in the Piedmont Physiographic Province of New Jersey. In the vicinity of Hanover Township the rocks which underlie the Piedmont Province consist entirely of consolidated sedimentary deposits of the Boonton member of the Brunswick Formation. This formation is composed of Triassic sandstone with interbedded shales.

Approximately 2,000 feet west of the site, the Brunswick Formation is truncated by the Great Border Fault which forms the actual geologic boundary between the Piedmont and the Highland Physiographic Provinces. A section of the Whippany River, located 0.50 mile west of the Airtron site, locally outlines the trend of this fault zone. Along this north-south trending fault, sedimentary rocks of the Brunswick Formation lie against Precambrian crystalline rocks. These crystalline rocks consist of a variety of hard gneisses, granites and schists. Overlying the Brunswick Formation are surficial deposits from a glacial delta of the Wisconsin Age which are predominantly composed of interbedded sands, gravels, silts and clays. None of the borings drilled on site penetrated

the underlying Brunswick Formation. The boring logs from this study indicate a depth to bedrock of greater than 138 feet. Available well logs from the surrounding area indicate that the thickness of glacial soils overlying bedrock is about 190 feet at a well located approximately 1,300 feet east of the site, and about 153 feet at a well located approximately 500 feet west of the site.

Topography slopes generally to the east-southeast from Airtron toward the Whippany River. The water table is encountered at depths ranging from approximately 40 to 60 feet below ground surface. The local groundwater flow direction is toward the southwest as influenced by the Mennen production well's excessive pumping of groundwater.

A total of nineteen monitoring wells have been installed at the Airtron site. Sixteen shallow monitoring wells were installed at depths ranging from 21 feet to 75 feet. Three deep monitoring wells were installed at depths ranging from 128 feet to 135 feet. Five of the shallow monitoring wells were installed in 1980, six monitoring wells were installed in 1987 and eight additional wells were installed in 1989. The eight wells installed in 1989 are located near Mennen's warehouse (three wells), near Mennen's manufacturing building (three wells) and on Airtron's property (two wells). Samples have not been obtained from the eight wells recently installed.

Airtron has been obtaining groundwater samples from three wells installed by the U.S. Geological Survey (USGS-1, 2 and 3), the two Mennen production wells (Men-1 and Men-2) and the Mennen Monitoring Well No. 10. USGS-1 is located approximately 500 feet northwest of the sludge beds. USGS-2 is located onsite and 200 feet east of the sludge beds. USGS-3 is located approximately 300 feet northeast of the sludge beds. Mennen Well No. 10 is located approximately 800 feet southwest of the sludge beds and within the vicinity of the Mennen warehouse. Mennen production wells Men-1 and Men-2 are located approximately 700 feet and 1,000 feet southwest of the sludge beds, respectively. The depth of the wells ranges from 68 feet to 100 feet. Airtron and the NJDEP, DWR have been sampling these monitoring wells since 1980. Groundwater contamination has been found in some of the shallow monitoring wells. The major contaminants are trichloroethylene (TCE), tetrachloroethylene (PCE), trans-1,2-dichloroethylene and chloroform. The concentrations of these compounds in the on-site monitoring wells 2, 2M, 3, 205, 206, USGS-1, USGS-2 and Men-1 exceed the N.J. Safe Drinking Water standards for TCE and PCE and the NJDEP action levels for TCE, PCE, trans-1,2-dichloroethylene and chloroform (USGS-1 for chloroform). These results are summarized in the Summary of Sampling Data. Based on these results and the direction of groundwater flow, the NJDEP, DWR, Bureau of Groundwater Discharge Control determined that the source of groundwater contamination is the former sludge drying beds.

Men-1 supplies non-contact cooling water for that company's operation. After use, the water is discharged into a fountain on the Mennen property and is later discharged into the Whippany River. Based upon monitoring data from 1980 to the present, Airtron determined that the use of Men-1 has prevented the plume of contamination from migrating any further off site. Results, however, from monitoring wells USGS-2 and 205 located approximately 200 feet east and 700 feet south indicate that Men-1 may not be completely containing the plume of contamination.

Within a 4 mile radius, drinking water is supplied by the Parsippany-Troy Hills Township Water Department, the Florham Park Water Department and the Southeast Morris County Municipal Utilities Authority (MUA). There are some areas approximately 1.75 miles west of the site and approximately 3.5 miles north of the site that are not serviced by public water and obtain water through private wells. The Parsippany-Troy Hills Water Department has five wells within a 4 mile radius, the Florham Park Water Department has two wells within a 4 mile radius and the Southeast Morris County MUA has ten wells within a 4 mile radius of the site. The depths of the wells range from 66 feet to 492 feet. A majority of these wells were installed in the glacial deposits of the Wisconsin Age. The Southeast Morris County MUA has two wells located approximately 0.70 miles northwest of the site. The depth of these wells are 125 feet and 138 feet. These wells, however, are currently not in use. The population served by potable wells within a 4 mile radius is approximately 131,600.

It is not known how many private potable wells are located within a 4 mile radius. There are at least five private wells located with a 1 mile radius. The closest well is approximately 0.325 mile southwest of the site and was installed at a depth of 200 feet. Another well is located 0.80 mile west of the site and is approximately 157 feet deep. The other wells were installed at depths ranging from 87 feet to 250 feet. It is not known if these private wells are used for drinking water.

There are approximately 40 irrigation and industrial wells located within a 4 mile radius of the site. The closest industrial well is located at the Mennen property approximately 0.25 mile southwest of the Airtron property. The depth of this well is 110 feet and is used to supply non-contact cooling water for production of Mennen. As mentioned earlier TCE, PCE and trans 1,2-dichloroethylene were detected in the well at levels exceeding drinking water standards and the NJDEP action levels. The closest irrigation well is located approximately 1.5 miles south of the site. This well is approximately 400 feet deep with a casing installed down to 170 feet. The well is used to irrigate crops, however, it is not known how many acres are irrigated from this well.

The potential for contamination of additional off-site wells exists. Current groundwater data indicates that the Mennen production well is not containing the contaminated plume at Airtron.

During a site reconnaissance conducted by Airtron's consultants in late 1987, an abandoned off-site landfill was discovered near MW-205, south of the facility. The landfill occupies approximately 2 acres and is located within the vicinity of the AT&T and Fabricated Plastics facilities. Most of the materials present were ash and cinders. In the far western portion of the landfill were approximately six 55-gallon drums sticking out of the landfill. One of the drums was oozing a thick, black oily substance. The owner of this property is not known. This may be an additional source of groundwater contamination on the Airtron property.

On December 14, 1979, the NJDEP, DWR issued an Administrative Order to Airtron for violating its permit to construct and operate its industrial wastewater facility. The misuse of the sludge drying beds resulted in groundwater contamination. On October 1, 1989 Airtron was issued a NJPDES DGW permit. The details of the permit were previously discussed.

SURFACE WATER

An unnamed tributary to the Whippany River crosses the eastern portion of the property. This stream flows into the Whippany River approximately 1 mile southeast of the site. Airtron discharges treated wastewater and storm water via the unnamed tributary to the Whippany River. Airtron monitors these discharges as required in its NJPDES/DSW permit. Details on this NJPDES permit were previously mentioned. There is no designated use of this tributary or the Whippany River; however, the surface water bodies may be used for recreational fishing or boating.

On December 31, 1985, October 17, 1986, November 5, 1987 and June 8, 1988 the Airtron facility received unacceptable ratings based on the NJPDES CEIs conducted by the NJDEP, DWR, BNE. Violations were cited for numerous effluent violations originating from the treated wastewater discharge. Effluent limitations were violated for the following parameters: arsenic, fluoride, methylene chloride, cyanide and total VOCs. The last violation occurred in July 1988 for exceeding the effluent limitations for total VOCs.

In March 1986, consultants for the Mennen Company obtained a stream sediment sample from the unnamed tributary which crosses the Airtron site. The sample was taken near the property boundary of the Airtron site and RCR Associates. The sample indicated the presence of arsenic and cadmium at levels which exceeded the NJDEP action levels for cleanup. There is a potential for contaminated stream sediments due to past discharges of hazardous substances via Airtron's DSN001.

AIR ROUTE

Airtron was issued 25 Air Pollution Control Permits (facility ID No. 25136) for its emissions from two boilers, a 10,000 gallon UST containing heating oil, the facility's spray paint booths, the plating operations area, the gallium arsenide production area, a dip pot furnace, the fluoride lab, the cleaning and plating oven, vapor degreasers and for a grit blaster/dust collector.

On September 9, 1988 the NJDEP, DEQ issued an Administrative Order and a \$200 penalty to Airtron for altering one of its vapor degreaser units without obtaining the appropriate NJDEP approval.

The potential exists for air contamination since the site is active.

SOIL

In December 1980 Airtron removed the sludge from its sludge beds and 12 inches of contaminated soil from the bottom and sides of the beds. A soil sample collected by Airtron's consultants in June 1987 revealed elevated levels of VOCs north and adjacent to the sludge bed area. The sample was collected 4.5 to 5 feet below grade. Major contaminants detected in the soil were trans-1,2-dichloroethylene, trichloroethylene, 1,1,2-trichloroethane, toluene and total xylenes. Total volatiles detected were 19,711 parts per billion (ppb). The NJDEP action level for total VOCs in soil is 1,000 parts per billion. It is the opinion of the NJDEP, DWR that the soil borings taken in 1987 did not penetrate through the sludge beds.

Another area which is a potential source of soil contamination is the outdoor drum storage area. As noted in the Presampling Assessment (PSA) conducted on December 20, 1989 by the NJDEP, DHWM, Bureau of Planning and

Assessment, numerous stains were observed on the cement pad which was not bermed. According to Airtron, designs for a drum storage shed which would replace the cement pad were submitted to the Township of Hanover for approval. Airtron has not yet received approval from the Township to construct the shed.

DIRECT CONTACT

There have been no reported incidents of direct contact with hazardous substances onsite. A potential exists if wastewater discharges are not properly treated prior to discharge into the tributary of the Whippany River. Such discharges could result in off-site contamination. Employees may also contact wastes on site through improper handling. Although the site is not completely fenced, the hazardous waste storage area is fenced and locked and the production areas are located indoors. Therefore, a low potential exists for direct contact by the off-site population.

FIRE AND EXPLOSION

Airtron stores its sludges, waste oils, waste solvents and raw materials such as metals and acids on the concrete pad. Many of the wastes manifested from the Airtron site from 1987 to 1989 were characterized as ignitable and corrosive wastes. A potential for fire and explosive conditions exists since:

- a. many of the wastes are incompatible with each other such as metals, metal sludges and corrosive solutions;
- b. many of the wastes stored on the pad are identified as ignitable wastes; and
- c. many of these containers are rusted and there is evidence of past spills and leaks as noted during the PSA conducted on December 20, 1989 by the NJDEP, DHWM, BPA.

ADDITIONAL CONSIDERATIONS

The Bald Eagle designated as a Federally endangered species and a New Jersey endangered species has been observed in the Morris County area. Other New Jersey endangered species include the Bog Turtle and the Coopers Hawk which are also observed in the Morris County area.

ENFORCEMENT ACTIONS

On December 14, 1979, the NJDEP, DWR issued an Administrative Order to Airtron for violating its permit to construct and operate its treatment facility, specifically, the sludge drying beds.

On September 23, 1987 Airtron was issued a Notice of Violation (NOV) from the NJDEP, DHWM, BNE. The NOV cited violations such as failure to receive copies of the Part B of certain manifests, wastes not segregated by waste type, containers not arranged so that labels are visible and no annual review of personnel training.

On September 9, 1988 the NJDEP, DEQ issued Airtron an Administrative Order and a \$200 penalty for altering one of two degreasing units without obtaining NJDEP approval.

SUMMARY OF SAMPLING DATA

1. Sampling date: April 8, 1980
Sampled by: NJDEP, DWR, BNE
Parsippany - Troy Hills, New Jersey
Samples: Two groundwater samples
Laboratory: N.J. Department of Health (NJDOH)
Laboratory Certification No. 11148
Trenton, New Jersey
Parameters: Total chromium, hexavalent chromium, copper,
zinc, silver, cadmium, nickel and volatile
organics.
Sample description: Two on-site monitoring wells MW-1 and 2
Contaminants detected: Trichloroethylene (TCE) and
tetrachloroethylene (PCE)

RESULTS FROM GROUNDWATER SAMPLES
COLLECTED APRIL 8, 1980

(ppb)

<u>WELL NO.</u>	<u>TCE</u>	<u>PCE</u>
MW-1	1,920	50
MW-2	250	ND

ND = Not detected

QA/QC: NJDOH, QA/QC data not available
File location: NJDEP, DWR, Bureau of Groundwater Discharge
Control (BGWDC)
Trenton, New Jersey

2. Sampling date: November 19, 1980
Sampled by: NJDEP, DWR, BNE
Parsippany - Troy Hills, New Jersey
Samples: Four groundwater samples
Laboratory: NJDOH Laboratory Certification No. 11148
Parameters: VOCs for all wells sampled
cyanide and metals for wells 4 and 5
Sample description: Four on site monitoring wells 1,2,4 and 5
Contaminants detected: PCE, 1,1,1-trichloroethane, chloroform, TCE

RESULTS FROM GROUNDWATER SAMPLES
COLLECTED NOVEMBER 19, 1980

(ppb)

<u>LOCATION</u>	<u>PCE</u>	<u>1,1,1-TRICHLOROETHANE</u>	<u>CHLOROFORM</u>	<u>TCE</u>
MW-1	1,027	32	45	6,463
MW-2	7	ND	ND	53
MW-4	ND	ND	32	ND
MW-5	78	8	2	760

(ppb)

<u>LOCATION</u>	<u>CYANIDE</u>	<u>Cr</u>	<u>Cu</u>	<u>Cd</u>	<u>Ni</u>	<u>Pb</u>	<u>Zn</u>	<u>Ag</u>	<u>Al</u>
MW-4	.009	193	253	1	233	28	1,145	17	46,035
MW-5	.001K	33	151	1	93	113	205	10K	26,550

ND = Not detected

K = Below detection limits

QA/QC:

NJDOH, QA/QC data not available

File location:

NJDEP, DWR, BGWDC, Trenton, New Jersey

3. Sampling dates: January 13, 1981 & June 23, 1981
 Sampled by: Converse Ward Davis Dixon Inc., Caldwell, New Jersey (June 23, 1981)
 and NJDEP, DWR, BNE, Parsippany - Troy Hills (January 13, 1981)
 Samples: Eight groundwater samples
 Laboratory: General Testing Inc. June 23, 1981
 and, NJDOH, (Laboratory Certification No. 11148) January 13, 1981
 Parameter: Trichloroethylene (TCE)
 Sample description: Samples were obtained from eight monitoring wells (1M, 2M, MW-1, MW-2, MW-3; USGS Wells 1, 2 and 3).
 Contaminants detected: TCE was detected in the monitoring wells as indicated below:

RESULTS FROM GROUNDWATER SAMPLES COLLECTED
JANUARY 13, 1981 & JUNE 23, 1981

(mg/l)

<u>WELL NO.</u>	<u>1/13/81</u> NJDEP	<u>6/23/81</u> GENERAL TESTING INC.
1M	.35	BROKEN
2M	2.90	.062
USGS-1	1100.00	14.60
USGS-2	.14	not sampled
USGS-3	.007	not sampled
MW-1	not sampled	.007

MW-2	not sampled	9.66
MW-3	not sampled	4.24

QA/QC: General Testing, Inc. was not a certified laboratory.
QA/QC package not available

NJDOH Lab. QA/QC data not available

File location: NJDEP, DWR, BGWDC, Trenton, New Jersey

4. Sampling date: June 1981
Sampled by: Converse Ward Davis Dixon, Inc., Caldwell, New Jersey
Samples: Eighteen soil samples
Laboratory: General Testing, Inc.
Parameters: TCE and Total Organic Carbon (TOC)
Sample description: Eighteen soil samples were analyzed for TOC. Duplicate analysis were performed on six soil samples analyzed for TCE.
Contaminants detected: TCE and TOC

RESULTS FROM SOIL SAMPLES
COLLECTED JUNE 1981

<u>WELL NO.</u>	<u>SAMPLE DEPTH ft.</u>	<u>TOC mg/gm</u>	<u>TCE (mg/l) ANALYSIS</u>	<u>TCE DUPLICATE ANALYSIS</u>
MW-1	20	255		
	40	288	.038	.104
	60	323		
MW-2	10	84		
	20	78	ND	ND
	30	66		
	40	247	.160	.190
	50	213		
	60	279	.490	.640
	70	203		
	80	618		
MW-3	20	92		
	40	260	.042	.026
	60	113		
	80	76.5		
B-1	6	30	228	ND
B-3	7	35	209	

QA/QC: General Testing, Inc. (not a certified
laboratory) and NJDOH
QA/QC data not available
File location: NJDEP/DWR/BGWDC
Trenton, New Jersey

5. Sampling dates: September 6 and 7, 1984
 Sampled by: NJDEP, DWR, BNE
 Samples: Seven groundwater samples
 Laboratory: NJDOH, Laboratory Certification No. 11148
 Parameters: VOCs
 Sample description: Three USGS wells (1,2,3), two on-site wells
 (2, 2M) and two Mennen two production wells
 (Men-1, Men-2).
 Contaminants detected: Major contaminants detected are summarized
 below:

RESULTS FROM GROUNDWATER SAMPLES
COLLECTED SEPTEMBER 6 AND 7, 1984

(ppb)

<u>LOCATION</u>	<u>1,2-DICHLOROETHYLENE</u>	<u>TOLUENE</u>	<u>TCE</u>	<u>PCE</u>	<u>1,1,1-TRICHLORO-ETHANE</u>
USGS-1	88	ND	4,310	984	16
USGS-2	65	ND	61	ND	ND
USGS-3	294	3.5	3,110	1,980	10
MW-2	126	ND	9,100	1,110	5.2
MW-2M	ND	ND	4,420	652	2.4
MEN-1	ND	ND	1,460	130	5.6
MEN-2	4.2	ND	64	ND	ND

<u>LOCATION</u>	<u>1,1-DICHLOROETHANE</u>	<u>1,1-DICHLOROETHYLENE</u>	<u>CHLOROFORM</u>
USGS-1	ND	ND	19
MW-2	2.3	3.6	ND
2M	ND	ND	18
MEN-2	ND	ND	ND
MEN-1	ND	34	6.3
USGS-2	ND	ND	ND
USGS-3	ND	ND	ND

ND = Not detected

QA/QC: NJDOH, QA/QC data not available
File location: NJDEP, DWR, Central File Room
Trenton, New Jersey

6. Sampling date: December 13 and 15, 1984
Sampled by: Converse Consultants, Inc., Caldwell
New Jersey
Samples: Seven groundwater samples
Laboratory: Princeton Testing Labs, Princeton, New Jersey
Laboratory Certification No. 11118
and Lab Resources, Rocky Hill, New Jersey
Laboratory Certification No. 02046
Samples were split
Parameters: VOCs
Sample description: Two USGS wells (1,2), four on-site wells
(1,2,3 2M) and two Mennen production wells
(Men-1, Men-2) were sampled. Three on-site
wells were resampled on December 15, 1984.
Contaminants detected: Major contaminants detected are summarized
below:

RESULTS FROM GROUNDWATER SAMPLES
COLLECTED DECEMBER 13 AND 15, 1984

(ppb)

<u>PARAMETER</u>	<u>MEN-1</u>	<u>USGS-1</u>	<u>USGS-2</u>	<u>MW-2M</u>	<u>MW-1</u>	<u>MW-2</u>	<u>MW-3</u>
Trans-1,2-dichloroethane	15	151 (160)	38	61	ND	103	19
1,1,1-Trichloroethane	ND	37 (132)	ND	10	ND	9	10
TCE	730	6100 (2000)	80	1300	ND	9000	2000
Chloroform	ND	31 (32)	ND	15	ND	ND	ND
Tetrachloro-ethylene	ND	1600 (390)	26	208	ND	1800	1400
1,1,2-Trichloro-ethylene	50	ND	ND	ND	ND	ND	ND
Toluene	ND	ND	ND	74	ND	ND	ND
Methylene Chloride	ND(6.6)	ND	ND	ND	ND	ND	ND
1,1-Dichloro-ethylene	ND (6.9)	ND	ND	ND	ND	ND	ND
1,2-Dichloro-ethylene	ND (160)	ND	ND	ND	ND	ND	ND

() results from Princeton Testing Laboratory which conflicted with Laboratory Resources

ND = Not detected

QA/QC:

File location:

Data not submitted to the NJDEP
NJDEP,DWR,Central File Room
Trenton, New Jersey

7. Sampling date: June 20, 1985
Sampled by: Converse Consultants, Caldwell, New Jersey
Samples: Six groundwater samples
Laboratory: Princeton Testing Laboratory, Princeton, New Jersey Laboratory Certification No. 11118
Lab Resources, Rocky Hill, New Jersey, Laboratory Certification No. 02046. Samples were split.
Parameters: VOCs
Sample description: Three on-site wells (2, 3, 2M), two USGS wells (1 and 2) and one from the Mennen Production Well (MEN-1).
Contaminants detected: Major contaminants detected are summarized on the following page:

QA/QC: QA/QC data not submitted to the NJDEP. Results did include a duplicate analysis of Well No. 2 analyzed by Princeton Testing Laboratory. Relative percent differences appeared acceptable with the exception of the methylene chloride parameter. Analysis of field blank and trip blank by Laboratory Resources revealed no detectable VOCs.

File location: NJDEP, DWR, Central File Room
Trenton, New Jersey

8. Sampling date: November 20, 1985
 Sampled by: Converse Consultants, Caldwell, New Jersey
 Samples: Six groundwater samples
 Laboratory: Laboratory Resources, Rocky Hill
 Laboratory Certification No. 02046
 Parameters: VOCs
 Sample description: Three on site wells (MW-2, 3, 2M), two USGS wells (1, 2), one Mennen Production Well No. 1 (Men-2).
 Contaminants detected: Major contaminants detected are listed below:

RESULTS FROM GROUNDWATER SAMPLES
COLLECTED NOVEMBER 20, 1985

(ppb)

<u>PARAMETERS</u>	<u>MEN-1</u>	<u>USGS-1</u>	<u>USGS-2</u>	<u>MW-2</u>	<u>MW-3</u>	<u>MW-2M</u>
Trans-1,2-dichloroethylene	.41	271	113	42	252	92
Chloroform	ND	22	ND	ND	ND	ND
TCE	1205	4629	41	5987	2188	1367
PCE	204	1130	31	1113	1057	295

ND = Not detected

QA/QC: QA/QC data not submitted to the NJDEP. Results did include analysis of a field blank and a trip blank. Analysis of the blanks revealed no detectable VOCs.

File location: NJDEP, DWR, Central File Room
Trenton, New Jersey

9. Sampling date: March 1986
 Sampled by: Dames and Moore, Cranford, New Jersey
 Samples: Three groundwater samples and one stream sediment sample.
 Laboratory: ETC Laboratories, Edison, New Jersey
 Laboratory Certification No. 07044.

Parameters: Priority Pollutants Analysis (USGS-1 and MW-10) USGS-2 was only analyzed for volatile organics.

Sample description: Three groundwater samples were collected from monitoring wells USGS-1, USGS-2 and Mennen's MW-10; one stream sediment sample (Brook 1) was collected at the rear of the property near Airtron.

Contaminants detected: Major contaminants detected are summarized below:

RESULTS FROM SAMPLES COLLECTED IN MARCH 1986

(ppb)

<u>PARAMETER</u>	<u>MW-10</u>	<u>USGS-1</u>	<u>USGS-2</u>	<u>BROOK 1</u>
<u>Volatile Compounds</u>				
Chloroform	ND	9.87	ND	ND
Tetrachloroethylene	224	463	26.6	ND
Toluene	47	ND	ND	ND
Trans-1,2-dichloro-ethylene	242	121	59.6	ND
1,1,1-Trichloro-ethane	14.3	11.7	ND	ND
Trichloroethylene	1,270	3,110	54.3	ND
<u>Base/Neutral Compounds</u>				
Acenaphthene	ND	ND	-	BMDL
Anthracene	ND	ND	-	BMDL
Bis(2-Ethylhexyl) phthalate	BMDL	ND	-	ND
Fluoranthene	ND	ND	-	299
Fluorene	ND	ND	-	BMDL
Phenanthrene	ND	ND	-	308
Pyrene	ND	ND	-	245
<u>Priority Pollutant Metals</u>				
Antimony	ND	ND	-	BMDL
Arsenic	ND	ND	-	72,000
Beryllium	ND	ND	-	1,000
Cadmium	BMDL	ND	-	5,000
Chromium	ND	ND	-	80,000
Copper	ND	ND	-	98,000
Lead	ND	ND	-	84,000
Nickel	BMDL	ND	-	17,000
Silver	ND	ND	-	4,000
Zinc	BMDL	ND	-	232,000

ND = Not detected
 BMDL = Below method detection limit
 - = Not tested

QA/QC: ETC Laboratories, QA/QC not submitted to the NJDEP.

File location: NJDEP, DHWM, Bureau of Federal Case Management
Trenton, New Jersey

10. Sampling date: June 11, 1986

Sampled by: Converse Environmental East

Samples: Six groundwater samples

Laboratory: Accutest, New Brunswick, N.J.
Laboratory Certification No. 12129
Townley Research Consulting, Inc.
North Plainfield, N.J.
Laboratory Certification No. 18071
Samples were split

Parameters: VOCs

Sample description: Three on-site wells (MW-2, 3, 2M), two USGS wells (1, 2) and one Mennen Production Well (Men-2).

Contaminants detected: Major contaminants detected are summarized on the following page:

QA/QC: QA/QC data not submitted to the NJDEP. Field blank analyzed by Accutest revealed no detectable VOCs.

File location: NJDEP,DWR,BNE
Parsippany - Troy Hills, New Jersey

11. Sampling date: May 26, 1987-June 1, 1987; June 3, 1987-June 5, 1987; June 8, 1987-June 11, 1987; June 15, 1987 and June 17, 1987, (soil samples)

August 17, 1987-August 19, 1987; September 30, 1987- October 1, 1987 (groundwater samples).

Sampled by: Converse Environmental East

Samples: Fifty-one soil samples and seventeen groundwater samples

Laboratory: York Laboratories
Whippany, New Jersey
Laboratory Certification No. 42202

Parameters: Groundwater samples were analyzed for VOCs, Base Neutral/Acid Extractables, pesticides, PCBs metals, and phenol.
Soil samples analyzed for VOCs and Base Neutral Acid Extractables.

Sample description: Soil samples submitted were limited to depth of 0.5 foot intervals. Samples in the vadose zone were screened with a portable organic vapor analyzer (OVA). If OVA measurements were low for a particular boring, the sample with the highest OVA reading was submitted for VOC analysis. If a particular boring had high OVA readings, the three samples with the highest OVA readings were submitted for analysis for VOCs. Groundwater samples were obtained from eleven on site wells (MWs 1, 2, 2M, 3, 201, 202, 203, 204, 205, 206, 412), four USGS Wells (1, 2, 3, 6) and two Mennen Wells (MEN-1, MEN-10).

Contaminants detected: Major contaminants detected are summarized on the following page:

QA/QC: York Laboratories, data submitted to NJDEP
for review. Review has not been conducted

File location: NJDEP, DWR, NBE
Parsippany - Troy Hills, New Jersey

12. Sampling date: April 26, 1988

Sampled by: Converse Environmental East

Samples: Thirty-four groundwater samples

Laboratory: York Laboratories, Whippany, New Jersey
Laboratory Certification No. 42202
and ICM Laboratories, Laboratory
Certification No.

Parameters: VOCs and base neutral/acid extractables for
MW-1.

Sample description: Ten on-site wells
(MW-1,2,2M,3,201,202,203,204,205,206) three
USGS wells (1,2,3) and two Mennen wells
(Men-1, Men-10).

Contaminants detected: Major contaminants detected are summarized
on the following page:

QA/QC: York Laboratories and ICM Laboratories QA/QC
data submitted to NJDEP. Data has not been
reviewed

File location: NJDEP, DWR, BNE
Parsippany - Troy Hills, New Jersey

13. Sample date: April 14, 1989
Sampled by: Converse Environmental East
Samples: Twelve groundwater samples
Laboratory: York Laboratories, Whippany, New Jersey
Laboratory Certification No. 42202

Parameters: VOCs

Sample description: Three USGS monitoring wells (1, 2, 3),
Two Mennen wells (MEN-1, MW-10) and seven
on-site monitoring wells (1, 2, 3, 2M, 204,
205 and 206).

Contaminants detected: Major contaminants detected are summarized
on the following page:

QA/QC: York Laboratories, QA/QC data
submitted to the NJDEP. Data has not been
reviewed by the NJDEP.
File location: NJDEP, DWR, BNE, Parsippany - Troy Hills
New Jersey

14. Sampling date: August 29, 1989
Sampled by: Converse Environmental East
Samples: 13 groundwater samples
Laboratory: York Laboratories, Whippany, New Jersey
Laboratory Certification No. 42202
Parameters: VOCs
Sample description: Three USGS monitoring wells (1, 2, 3, 1
duplicate sample on USGS 3), two Mennen wells
(Men-1, Men-10) and seven on-site wells
monitoring wells (MWS 1, 2M, 3 204, 205,
206).
Contaminants detected: Major contaminants detected are summarized
on the following page:

QA/QC: York Laboratories, QA/QC data
submitted to the NJDEP. The data was not
reviewed by the NJDEP
File location: NJDEP, DWR, Central File Room
Trenton

SURFACE WATER SAMPLES FROM DSN001

Sampled by: Airtron
Samples: 24 hour composites sampled two times per
month
Laboratories: Century Environmental Testing
1985-approximately May 1986
Laboratory Certification No. 01284.
Townley Research Consulting, Inc.
Laboratory Certification No. 18071
May 1986 to present
Parameters: Fluorine, Total cyanide, arsenic, cadmium,
chromium, total VOCs, nickel, silver, zinc
and methylene chloride.
Sample description: 24 hour composites, with the exception of
VOCs (grab). Results are reported in either
mass loading values or in concentrations.
Contaminants detected: Contaminants are summarized below:

<u>MONITORING PERIOD</u>	<u>PARAMETER</u>	<u>PERMIT LIMIT</u>	<u>RESULTS REPORTED</u>
September 1985	VOCs da.max. .100 mg/l	<690	mg/l
	Arsenic mo.avg. .003 kg/d		.07 kg/d
	Arsenic da.max. .008 kg/d		.631 kg/d
	Fluoride mo.avg. .07 kg/d		.182 kg/d
	Fluoride da.max. .012 kg/d		.175 kg/d
June 1986	Arsenic mo.avg. .003 kg/d		.012 kg/d
	Arsenic da.max. .008 kg/d		.023 kg/d
	Cyanide mo.avg. .021 kg/d		.03 kg/d
	Cyanide da.max. .04 kg/d		.06 kg/d
	Fluoride mo.avg. .07 kg/d		.115 kg/d
	Fluoride da.max. .12 kg/d		.2 kg/d
April 1987	Arsenic mo.avg. .003 kg/d		.007 kg/d
	Arsenic da.max. .008 kg/d		.010 kg/d
	Copper, mo.avg. .02 kg/d		.03 kg/d
	Copper, mo.max. .04 kg/d		.06 kg/d
May 1987	Arsenic mo.avg. .003 kg/d		.008 kg/d
	Arsenic da.max. .008 kg/d		.012 kg/d
November 1987	VOCs da.max. .100 mg/l		112 mg/l
December 1987	VOCs da.max. .100 mg/l		1,719.85 mg/l
January 1988	VOCs da.max. .100 mg/l		162 mg/l
February 1988	VOCs da.max. .100 mg/l		121 mg/l
July 1988	VOCs da.max. .100 mg/l		131 mg/l

mo.avg. - Monthly average
da.max. - Daily maximum
kg/d - kilograms per day
mg/l - milligrams per liter

RESULTS FROM SOIL SAMPLES COLLECTED IN MAY AND JUNE 1987

<u>PARAMETER</u>	<u>B-106.8</u> <u>40-40.5 ft.</u>	<u>B-108.9</u> <u>40-40.5 ft.</u>	<u>B-109.7</u> <u>35-35.5 ft.</u>	<u>B-109.11</u> <u>55-55.5 ft.</u>	<u>B-114.3</u> <u>14.0-14.5 ft.</u>
TCE	39	18	28	30	43
PCE	21	19	6	11	60
Trans-1,2,- dichloroethylene	ND	ND	ND	ND	81

	<u>B-114.4</u> <u>20.0-20.5 ft.</u>	<u>B-114.7</u> <u>29.5-30 ft.</u>	<u>B-115.2</u> <u>10.5-11.0 ft.</u>	<u>B-115.7</u> <u>35-35.5 ft.</u>	<u>B-116.8</u> <u>4.5-5.0 ft.</u>	<u>B-117.1A</u> <u>4.5-5.0 ft.</u>
TCE	5J	9J	ND	ND	11J	740J
PCE	67	150B	2JB	4J	35	
Trans-1,2- dichloroethylene	3J	95	41	13	3J	1,900
Toluene	2J	3JB	4JB	7J	11	8,700
Methylene Chloride	9JB	19B	11JB	21B	2JB	220J
Trichlorofluoromethane	13JB	11JB	4JB	8JB	520JB	520JB
Chloroform	ND	ND	ND	ND	ND	91J
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	5,800
Total xylenes	ND	ND	ND	ND	ND	1,400

(ppb)

	B-117.7	B-117.4	B-118.4	B-118.8	B-118.9	B-119.7
<u>PARAMETER</u>	<u>35.0-35.5 ft.</u>	<u>20-20.5 ft.</u>	<u>20-20.5 ft.</u>	<u>39.5-40 ft.</u>	<u>44.5-45.0 ft.</u>	<u>34-36 ft.</u>
TCE	2JB	3J	13	9J	74	5J
PCE	29	16	7J	15	55	29
Trans-1,2-dichloro- ethylene	5J	8J	7J	6J	ND	ND
Toluene	11	25	2JB	2JB	ND	2J
Methylene Chloride	2JB	2JB	3J	3J	16JB	22B
Trichlorofluoromethane	8JB	11JB	12B	12B	53	10JB
Chloroform	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethylene	ND	ND	7J	15	55	ND
Total xylenes	ND	ND	ND	ND	ND	ND

(ppb)

	B-103.1	B-104.1
<u>PARAMETER</u>	<u>4-6ft.</u>	<u>5-5.5 ft.</u>
Di-n-butylphthalate	2,150B	3,140B

GROUNDWATER SAMPLING RESULTS
ROUND 1 AUGUST 17, 1987-AUGUST 18, 1987

(ppb)

<u>PARAMETER</u>	<u>MW-2</u>	<u>MW-2M</u>	<u>MW-3</u>	<u>MW-204</u>	<u>MW-205</u>	<u>MW-206</u>
Methylene Chloride	580	ND	1,200B	190B	ND	ND
TCE	7,200	2,000	2,000	ND	ND	3,300B
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	14
PCE	3,000	530	1,500	ND	ND	2,000D
Trans-1,2-dichloro-ethylene	180J	180J	230J	ND	ND	
Toluene	94JB	ND	96JB	2J	2JB	ND

(ppb)

<u>PARAMETER</u>	<u>MW-412</u>	<u>USGS-1</u>	<u>USGS-2</u>	<u>USGS-6</u>	<u>MEN-10</u>	<u>MEN-1</u>
Methylene Chloride	ND	ND	12	14B	ND	650B
TCE	3,200D	9,000D	46	4J	1,300D	1,100
1,1,1-Trichloroethane	15	28	ND	ND	6	ND
PCE	2,000D	2,900D	4J	ND	2J	ND
Trans-1,2-dichloro-ethylene	480D	580D	36	ND	230J	53J
Toluene	1JB	ND	ND	1JB	ND	90JB

GROUNDWATER
SAMPLING RESULTS
ROUND 2
SEPTEMBER 30-OCTOBER 1, 1987

(ppb)

<u>PARAMETERS</u>	<u>MW-2</u>	<u>MW-2M</u>	<u>MEN-1</u>	<u>MW-3</u>	<u>MW-6</u>	<u>MW206</u>	<u>USGS-1</u>	<u>USGS-2</u>	<u>MEN-10</u>
Methylene Chloride	1,900	410	110	136JB	3JB	2,600	110J	ND	740
TCE	6,700B	1,800	1,200JB	2,564	2,500DB	3,200B			
PCE	2,900B	520B	200JB	2,153	2,000B	2,500B	3,240	11	620B
Trans-1,2-dichloro-ethylene	180J	ND	60DJ	287	300D	510	635	37	310
Toluene	ND	50JB	140JB	152JB	2B	ND	86J	1J	55J

* exceeded holding time for base neutral/acid extractable analysis for soils

ND = Not detected

B = Compound found in blank

J = Estimate

D = Diluted by a factor of 50

RESULTS FROM GROUNDWATER SAMPLES
COLLECTED JUNE 20, 1985

(ppm)

<u>PARAMETER</u>	<u>2M</u>	<u>MEN-1</u>	<u>USGS-1</u>	<u>USGS-2</u>	<u>MW-2</u>	<u>MW-3</u>
METHYLENE CHLORIDE	57 (ND)	52 (ND)	ND	54 (ND)	ND	450 (ND)
TRANS-1,2-DICHLOROETHYLENE	63 (67)	54 (46)	140 (ND)	59 (50)	420 (259)	400 (34)
CHLOROFORM	18 (ND)	16 (ND)	ND (23)	ND	ND	ND
TRICHLOROETHYLENE	620 (1115)	800 (869)	3100 (2463)	6000 (66)	49 (6850)	2000 (2082)
PCE	170 (200)	170 (199)	1300 (1050)	30 (33)	2600 (3125)	1600 (1672)
1,1,1-TRICHLOROETHANE	ND (40)	ND	ND (22)	ND	ND (17)	ND (11)

() = Results from Laboratory Resources Which conflicted with results from Princeton Testing Laboratory
ND = Not detected

RESULTS FROM GROUNDWATER SAMPLES COLLECTED ON JUNE 11, 1986

(ppb)

<u>PARAMETER</u>	<u>2M</u>	<u>MW-2</u>	<u>MW-3</u>	<u>MEN-2</u>	<u>USGS-1</u>	<u>USGS-2</u>
Chloroform	12 (14)	ND	ND	ND	ND	ND
Trans 1,2-dichloro-ethylene	49 (93)	123 (305)	208 (52)	32 (72)	25 (94)	38 (98)
PCE	113 (186)	438 (1130)	442 (370)	4.1 (6)	119 (220)	14 (22)
Toluene	18 (46)	92 (62)	44 (47)	ND	5.9 (19)	ND
1,1,1-trichloro-ethane	7 (4)	9.8 (ND)	16 (ND)	ND	ND (3)	ND
TCE	574 (470)	1536 (1490)	783 (540)	398 (43)	609 (368)	44 (52)
1,1-dichloro-ethylene	ND (2)	ND	ND	ND	ND (4)	ND

() Results from Townley Research & Consulting, Inc. which conflicted with results from Accutest
 ND = Not detected

RESULTS FROM GROUNDWATER SAMPLES COLLECTED ON APRIL 26, 1988

(ppb)

<u>PARAMETER</u>	<u>205</u>	<u>206</u>	<u>MW-2</u>	<u>MW-3</u>	<u>2M</u>	<u>USGS-1</u>	<u>USGS-2</u>	<u>MEN-10</u>	<u>MEN-1</u>
PCE	ND	2,100	160B	170B	420	4,000	62	420	280
	ND	2,100	280B	280B	380	3,500	160	340	220
TCE	49	3,000	3,200	2,100	1,800	9,500	55	1,500	1,500
	42	3,000	3,000	2,200	1,500	7,900	280	1,200	500
Methylene Chloride	2B	73B	ND	ND	ND	ND	1B	91B	50B
	ND	44B	ND	ND	ND	66	ND	6B	ND
Trans-1,2-dichloroethylene	ND	406	220	340	170	480	35	236	99
	ND	780	190	360	ND	420	48	300	35

ND = Not detected

B = Detected in blank

RESULTS FROM GROUNDWATER SAMPLES COLLECTED ON APRIL 14, 1989

(ppb)

	<u>MW-206</u>	<u>MW-2</u>	<u>MW-2M</u>	<u>MW-3</u>	<u>MW-205</u>	<u>USGS-1</u>	<u>USGS-2</u>	<u>MEN-1</u>	<u>MEN-10</u>
TCE	2400D	6700D	310	2700D	50	6200D	36	1600D	5400D
PCE	1600D	2900D	92	1500D	ND	3100D	26	110	3200D
Trans-1,2-di- chloroethylene	ND	ND	ND	ND	ND	1	ND	ND	NI
1,1,1-Trichloro- ethane	10	ND	ND	ND	ND	18	ND	1J	ND

ND = Not detected

J = Estimated concentration

D = Diluted sample

RESULTS FROM SAMPLES COLLECTED ON AUGUST 29, 1989

(ppb)	<u>MW-2</u>	<u>MW-2M</u>	<u>MW-3</u>	<u>206</u>	<u>USGS-1</u>	<u>MEN-10</u>	<u>MEN-1</u>	<u>USGS-2</u>
Methylene chloride	ND	3J	3J	130	ND	ND	ND	ND
TCE	7,600D	1,100D	3,600D	2,400	13,000	1,400	860D	4
PCE	2,400D	150	1,500D	1,800	8,200	660	170	32
Trans-1,2-di-chloro-ethylene	3J	ND	ND	1,300D	ND	ND	ND	ND

ND = Not detected

J = Estimate

D = Diluted

LITTON INDUSTRIES, AIRTRON DIVISION
200 EAST HANOVER AVENUE
HANOVER TOWNSHIP, MORRIS COUNTY, NEW JERSEY
EPA ID NO. NJD030239412

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- F. LETTER DATED 12/31/85 FROM THE NJDEP, BNE RE: COMPLIANCE
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- O. WELL INVENTORY SURVEY WITHIN 1.5 MILE RADIUS OF THE AIRTRON SITE, CONDUCTED BY CONVERSE ENVIRONMENTAL EAST, SOIL AND GROUNDWATER REMEDIAL INVESTIGATION PHASE I, 11/24/87
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- HH. ADMINISTRATIVE ORDER AND 200 PENALTY ISSUED ON 9/9/88 BY THE NJDEP, DEQ



SCALE 1:24000
 1000 0 1000 2000 3000 4000 5000 6000 7000 FEET
 1 KILOMETER

CONTOUR INTERVAL 20 FEET
 DATUM IS MEAN SEA LEVEL
 Lat: 40°49'04"
 Long: 74°28'15"

Litton Industries, Airtron Division
 200 East Hanover Avenue
 Hanover Twp, Morris County
 EPA ID No. NJD0496832

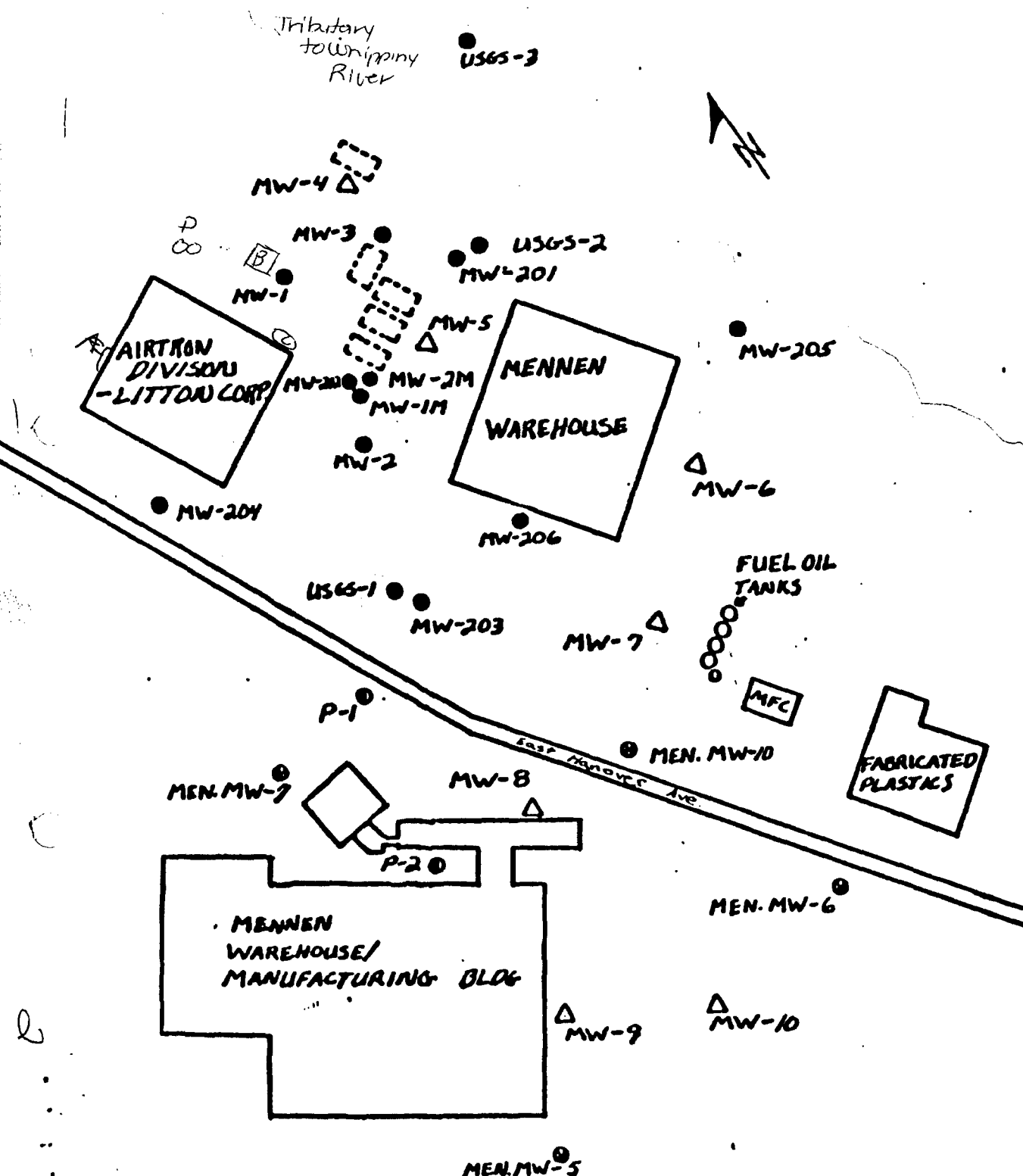
ATTACHMENT II Airtron Site Map with Well Locations

key

- Existing Monitoring Well at Airtron
- ⊗ Mennen Monitoring Well
- ⊙ Mennen Production Well

△ NJDEP Monitoring Well required installed 12/89

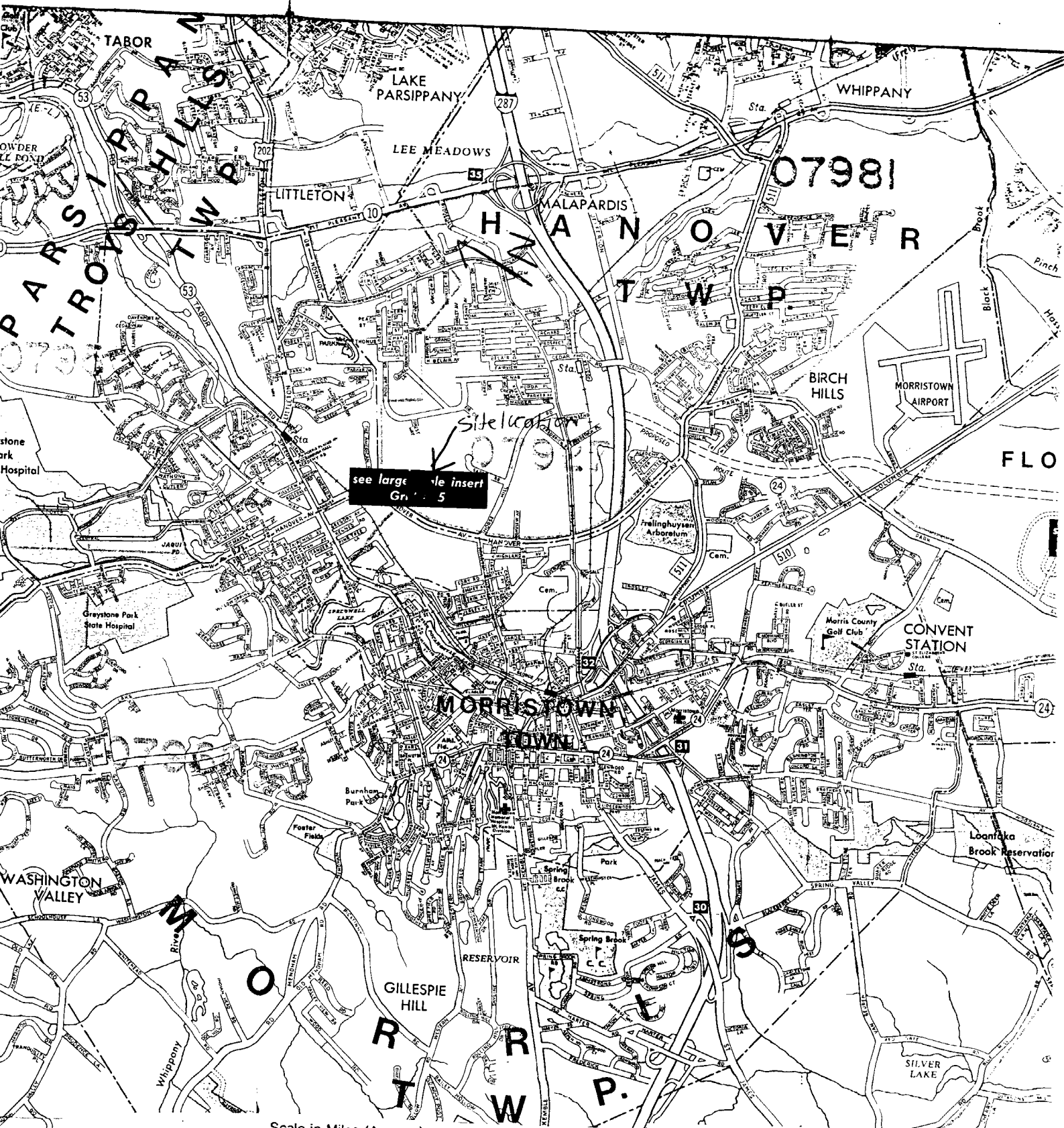
- A - PCB transformers
- B - Hazardous waste storage heating area
- C - 10,000 gallon UST w/ #6 fuel oil
- D - liquid nitrogen tank & liquid argon tank



Litton Industries, Airtron Division
200 East Hanover Avenue
Hanover Twp, Morris County
EPA ID No. NJD0496832

Scale

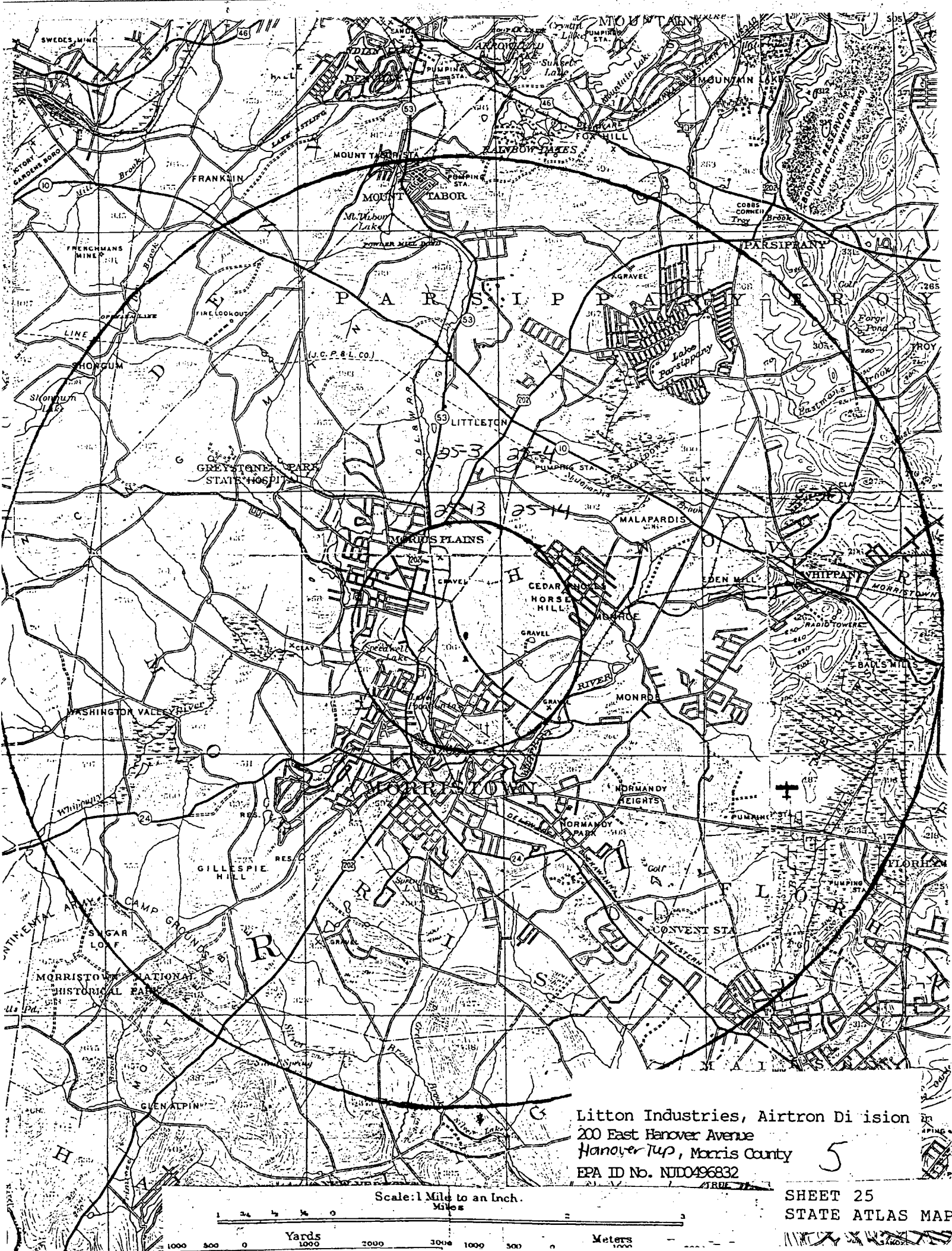
SITE MAP



Scale in Miles (Approx.)

Scale in Kilometers (Approx.)

Litton Industries, Airtron Division
200 East Hanover Avenue
Hanover Twp Morris County
EPA ID No. NUD0496832
Morris Co. Road Map



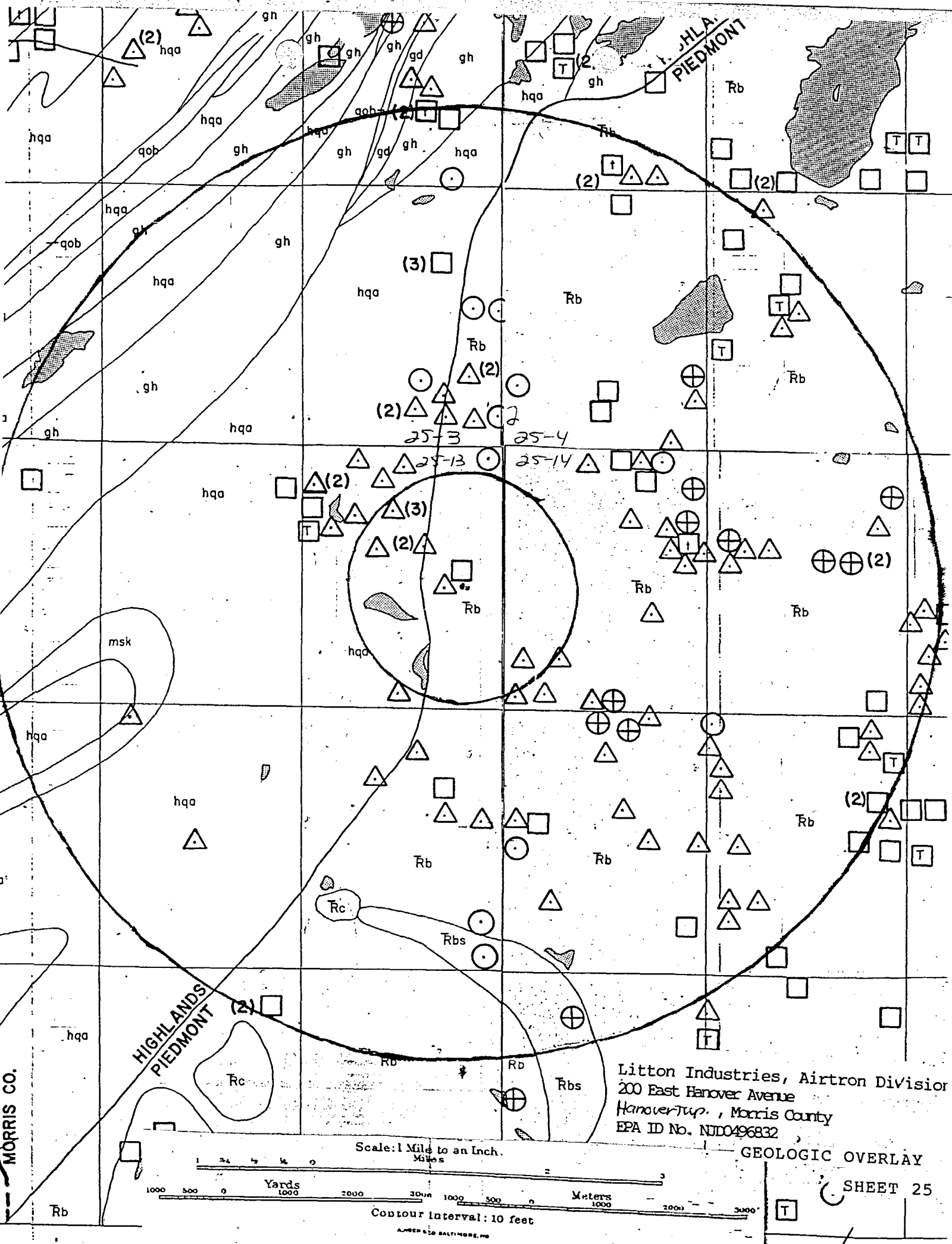
Litton Industries, Airtron Division
200 East Hanover Avenue
Hanover Twp, Morris County
EPA ID No. NJD0496832

5

Scale: 1 Mile to an Inch.
Miles

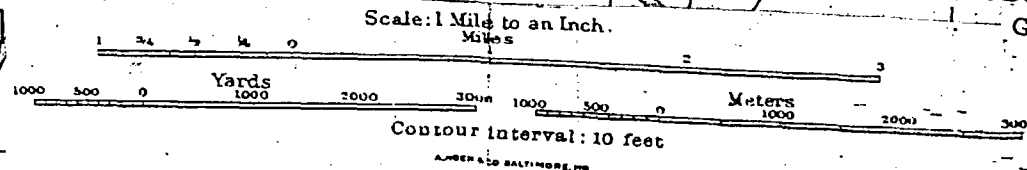
Yards 1000 2000 3000 4000 5000
Meters 1000 2000 3000 4000 5000

SHEET 25
STATE ATLAS MAP



Litton Industries, Airtron Division
200 East Hanover Avenue
Hanover Twp., Morris County
EPA ID No. NJD0496832

GEOLOGIC OVERLAY
SHEET 25



LEGEN. FC ATLAS SHEET 25 (GF LOGY)

- △ — INDUSTRIAL WELL YIELD OVER 70 GALLONS PER MINUTE (INCLUDING PRIVATE WELLS)
- — PUBLIC SUPPLY WELL YIELDING OVER 70 GALLONS PER MINUTE
- ⊕ — UNSUCCESSFUL ROCK WELL YIELDING LESS THAN 70 GALLONS PER MINUTE
- ⊙ — UNSUCCESSFUL SAND WELL YIELDING LESS THAN 70 GALLONS PER MINUTE
- † — NO TEST — NO DATA ON YIELD

— -- FAULT (DASHED WHERE INFERRED)

— -- CONTACT (DASHED WHERE INFERRED)

— -- PHYSIOGRAPHIC PROVINCE BOUNDARY

— -- WATER SUPPLY TRANSMISSION LINE

NOTE: WHERE THE PRECAMBRIAN FORMATION BOUNDARIES TERMINATE ABRUPTLY, IT IS THE GEOLOGIST'S OPINION THAT THE GEOLOGICAL COMPLEXITY OF THE AREA PREVENTS FURTHER INTERPRETATIONS.

Kmr — CRETACEOUS MAGOTHY AND RARITAN FORMATIONS (SAND AND CLAY)

Trb — TRIASSIC BRUNSWICK FORMATION

Trc — TRIASSIC CONGLOMERATE BEDS OF THE STOCKTON FORMATION

Trl — TRIASSIC LOCKATONG FORMATION

Trdb — TRIASSIC DIABASE

Trbs — TRIASSIC BASALT FLOWS

Sd — SILURIAN DECKER LIMESTONE AND LONGWOOD SHALE FORMATIONS

Sgp — SILURIAN GREEN POND CONGLOMERATE

Omb — ORDOVICIAN MARTINSBURG SHALE

ok — CAMBRO ORDOVICIAN KITTATINNY LIMESTONE

ch — CAMBRIAN HARDYSTON SANDSTONE

PRECAMBRIAN:

gh — HORNBLLENDE GRANITE WITH PYROXENE GRANITE

ga — ALASKITE

am — AMPHIBOLITE

px — PYROXENE GNEISS

gnq — QUARTZ PLAGIOCLASE GNEISS









gnb — BIOTITE GNEISS

sk — SKARN, GRAPHITE SCHIST







fnd — FORMATION NOT DETERMINED

LEGEND






WATER SUPPLY

-  AREA SERVED BY PRIVATE WATER SERVICE COMPANIES
-  AREA SERVED BY REGIONALLY OWNED WATER SERVICE COMPANIES
-  AREA SERVED BY MUNICIPALLY OWNED WATER SERVICE COMPANIES
-  AREA NOT PRESENTLY SERVED BY WATER SERVICE
-  PUBLIC SUPPLY WELLS
-  SURFACE WATER INTAKE
-  MAJOR WATER MAINS
-  WATER MAIN ACROSS HIGHWAY FOR FUTURE USE









SEWAGE, LANDFILL

-  AREA SERVED BY PUBLIC SEWAGE SERVICE
-  AREA NOT PRESENTLY SERVED BY SEWAGE SERVICE
-  SANITARY LANDFILLS
-  SEWAGE TREATMENT PLANTS (CAPACITY < 0.3mgd)
-  SEWAGE TREATMENT PLANTS (CAPACITY ≥ 0.3mgd)
-  MAJOR SEWAGE TRANSMISSION LINES

DRAINAGE BASIN

-  DRAINAGE BASIN BOUNDARY
-  RIVER BASIN BOUNDARY
-  HUDSON DRAINAGE BASIN NAME
-  STREAMS AND RIVERS
-  FLOOD PRONE AREAS

POPULATION

-  COUNTY BOUNDARY
-  MUNICIPAL BOUNDARY
-  POPULATION DENSITY IN PERSONS PER SQUARE MILE
-  AREA IN SQUARE MILES
-  PERCENT AREA OF MUNICIPALITY ON BLOCK
-  MARKET ROADS
-  BUILT UP AREAS
-  STATE BOUNDARY

LEGEND-LAND USE

URBAN AND BUILT-UP LAND

- 11 RESIDENTIAL
- 12 COMMERCIAL & SERVICES
- 13 INDUSTRIAL
- 14 TRANSPORTATION, COMMUNICATION & UTILITIES
- 15 INDUSTRIAL & COMMERCIAL COMPLEXES
- 16 MIXED URBAN & BUILT-UP LAND
- 17 OTHER URBAN OR BUILT-UP LAND

AGRICULTURAL LAND

- 21 CROPLAND & PASTURE
- 22 ORCHARDS & HORTICULTURAL AREAS

FOREST LAND

- 41 DECIDUOUS
- 42 EVERGREEN
- 43 MIXED

WATER

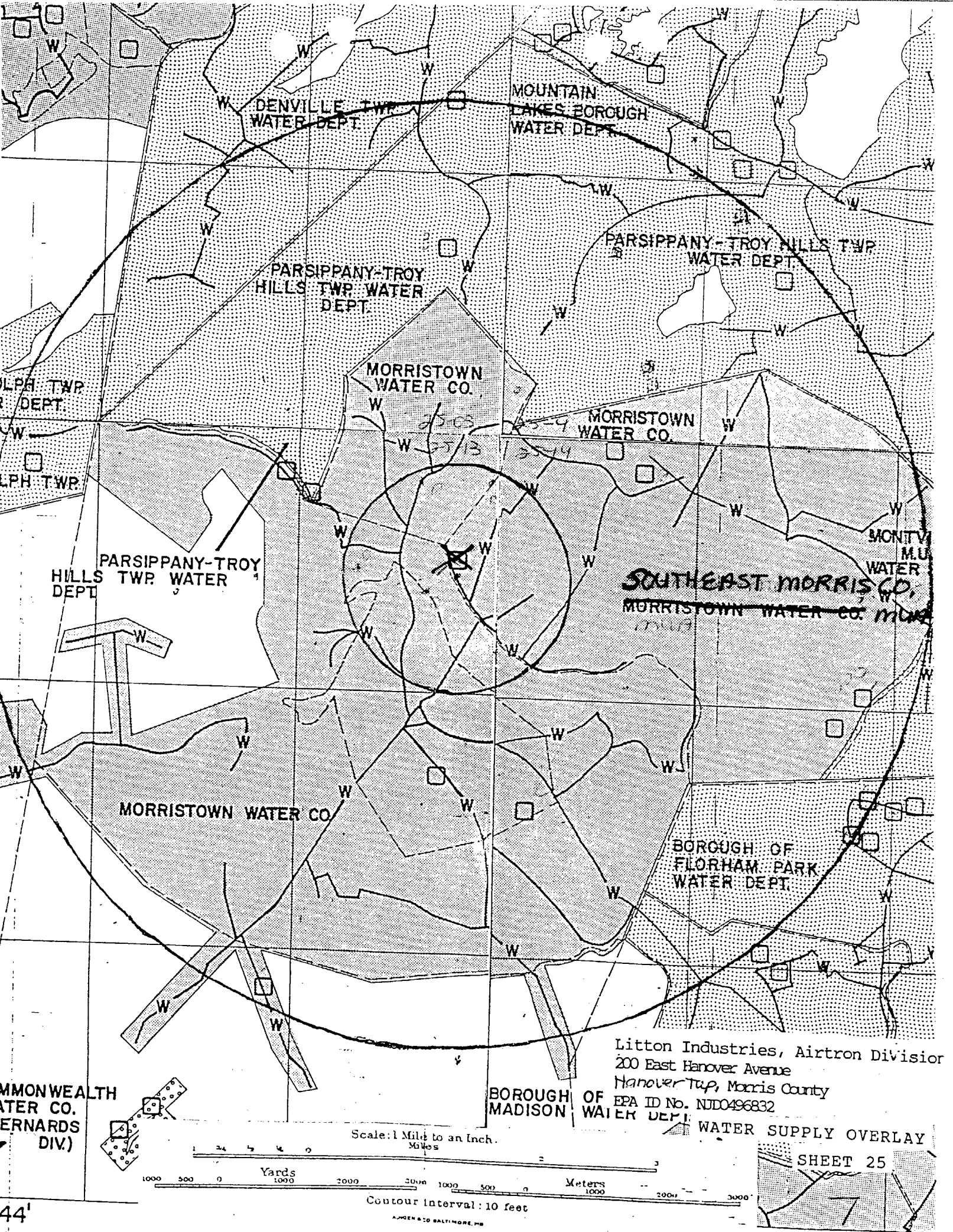
- 51 STREAMS & CANALS
- 52 LAKES
- 53 RESERVOIRS
- 54 BAYS & ESTUARIES

WETLAND

- 61 FORESTED WETLAND
- 62 NONFORESTED WETLAND

BARREN LAND

- 72 BEACHES
- 73 SAND OTHER THAN BEACHES
- 74 BARE EXPOSED ROCK
- 75 STRIP MINES, QUARRIES, & GRAVEL PITS



A. Boonton, Dover, Mendham, Morristown

B. Passaic-Rockaway, Whippany

C. 3. Map No.	Location	Period of Record
256	Rockaway River at Dover (Rutgers St.)	1964

Water Quality Standards: (explained in Atlas Sheet descriptions) FW2

D. Brunswick Formation (Trb), hornblende granite with pyroxene granite (gh), quartz-plagioclase gneiss (gnq), pyroxene gneiss (px), amphibolite (am), biotite-quartz-feldspar gneiss (qnb)

E. 1. Physiographic Province: New England (Reading Prong)
Subdivision: N.J. Highlands
Major Topographic Features: Wisconsin Terminal Moraine, Rockaway River Valley, Green Pond Mountain
Elevations (ft. above sea level): ridges 1000; valleys 400
Relief (ft.): 600

2. a. Normal Year: 50"
Dry Year: 36"
Wet Year: 68"

b. January: 28°F
July: 72°F

c. 233 days. Last killing frost: 4/5; first killing frost: 10/15

3. a. Approximately 15% urban or suburban. Municipalities: Denville, Dover, Parsippany-Troy Hills, Randolph, and Rockaway
b. Dairying predominant. Poultry, corn, oats, and vegetables
c. Less than 10%. Oak predominant
d. Chemical, electrical, machinery, rubber, plastics, apparel, and paper
e. Sand and gravel. Magnetite iron ore has historically been important. Major inactive mines include: Teabo Mines (25-03-129), Mt. Hope Mine (25-03-133), Allen Mines (25-03-143), White Meadow Mines (25-03-234), Beach Glen Mine (25-03-321), Swedes Mine (25-03-438), Munson Mine (25-03-476)
f. I-80, U.S. 46, U.S. 202, N.J. 53, N.J. 10; Erie R.R.; Morris Canal (abandoned)

F. Jersey City:
Municipal Watershed
Morris County:
James Andrew Memorial Park

G. Picatinny Arsenal, U.S. Army

I. Water Well Records

<u>Location</u>	<u>Owner</u>	<u>Year Drilled</u>	<u>Screen Setting or Depth of Casing</u>	<u>Total Depth</u>	<u>g/m Yield</u>	<u>Formation</u>
25-03-241	Boro of Rockaway			300	0	PE
25-03-246	White Meadows Water Co.			88	0	"
25-03-295	Boro of Rockaway	1974	78-93	93	455	Qtm
25-03-297	"	1962	63	82	517	px
25-03-325	Boonton Radio Corp.	1960	70	98	0	gng
25-03-321	"	1960	92-95	105	108	gh
25-03-324	"	1960	93'10"	125	548	"
25-03-347	Rockaway Twp.	1965		35	0	gng
25-03-347	"	1967		163'2"	548	"
25-03-347	Central Morris Ind. Park			153	300	Q
25-03-347	Boro of Rockaway			196	75	PE
25-03-357	Boro of Denville			147	1225	Q
25-03-388	Twp. of Denville	1958	20	96	500	px
25-03-417	Metal Hose & Tubing Co.	1963	11	53	300	"
23-03-445	Food Fair Stores Inc.	1957	11'10"	70	400	gh
23-03-445	Dover Shopping Center			97	144-	Q
25-03-453	Town of Dover	1960	79'11"	85		gnb
25-03-455	"	1960	115'6"	130'6"	383	"
25-03-461	"	1962	120	138	1455	gh
25-03-461	"	1962	126	150	566	"
25-03-523	Boro of Rockaway			72	210	Q
25-03-525	"			140	800	"
25-03-525	"	1961	103	139	500	px
25-03-526	"	1956		51		"
25-03-529	Radio Corp. of America	1956	57	400	27	"
25-03-533	Boro of Rockaway	1955	70	81	50	"
25-03-545	Austenal Milrocast			400	27	PE
25-03-545	"			136	221	Q
25-03-547	Austenal Laboratories	1954	40	50	400	px
25-03-552	Radio Corp. of America	1956	63	543	219	"
25-03-621	Denville	1961	178	201	1018	gh
25-03-622	Denville Twp.	1975	145-165	212	235	Qsd
25-03-624	Boro of Denville			205	-	Q
25-03-631	Denville Twp.	1975	168	180	0	PE
25-03-632	"	1975	138	140	0	"
25-03-632	St. Francis Sanatorium			126	75	"
25-03-632	H. Beherns			202	0	Q-PG
25-03-632	Crane, A.D. Co.			202	0	"
25-03-638	Boro of Denville			102	-	Q
25-03-638	"			85	-	"
25-03-645	Twp. of Denville	1967	48	72		gh
25-03-652	Crane, A.D. Co.			207	20	PE
25-03-653	Edward R. Garage			202	90	Q
25-03-659	N.J. Power & Light	1955	56'5"	75	225	gh
25-03-659	Advance Pressure Casting Co.	1959	78	87	78	"
△25-03-683	Twp. of Denville	1960		97		"
△25-03-683	Boro of Denville			125	-	Q
△25-03-691	Parsippany-Troy Hills, Twp. of			36	75	"
△25-03-697	Internatl. Pipe & Ceramics Corp.			180	0	"

Δ 25-03-937	Parsippany-Troy Hills, Twp.of		150	195	Q-P6
Δ 25-03-937	"		195	263	"
Δ 25-03-937	"		150	402	"
Δ 25-03-965	Warner Chilcott Laboratories	1957	143		px
Δ 25-03-966	"	1957	146		"
Δ 25-03-983	"		97	0	Q
Δ 25-03-986	Maltine Co.		174	130	"
Δ 25-03-986	"		135	115	"
Δ 25-03-992	Warner Chilcott Labs		75	500	"
Δ 25-03-992	"	1957	58	102	500 px
Δ 25-03-994	Warner Lambert Pharmaceutical	1960	87'2"	107'2"	518 "
Δ 25-03-994	Maltine Co.		130	70	Q
Δ 25-03-994	Warner Chilcott Labs		70	850	"
Δ 25-03-995	"	1957	76	108	1000 px
Δ 25-03-996	Chilcott Laboratories, Inc.	1954	100	100	"
Δ 25-03-996	Warner Chilcott Labs		93	0	Q

J. Geodetic Control Survey monuments described
Index Maps 13,14,19,26

A. Boonton, Caldwell, Morristown, Pompton Plains

B. Passaic-Pompton, Rockaway, Upper Passaic, Whippany

C. 1. Boonton - Non-recording temperature and precipitation gauges

2. Map No.	Location	Period of Record
15	Rockaway River above Reservoir at Boonton	1937-
16	Rockaway River below Reservoir at Boonton	1903-1904, 1906-
3. 257	Rockaway River at Boonton (Rt.202)	1964-
259	Whippany River at Rockaway Neck	1965-
269	Rockaway River at Parsippany-Troy Hills (Rt.46)	1968-

Water Quality Standards: (explained in Atlas Sheet description) FW2

D. Brunswick Formation (Trb), Triassic Conglomerates (Trc), Basalt Flows (Trbs), diabase (Trdb), biotite-quartz-feldspar gneiss (qnb), hornblende granite with pyroxene granite (gh), quartz-plagioclase gneiss (gng), pyroxene gneiss (px)

E. 1. Physiographic Province: New England (Reading Prong) -
 Subdivision: N.J. Highlands
 Major Topographic Features: Passaic Range
 Elevations (ft.above sea level): ridges 850, valleys 150
 Relief (ft.): 700

2. a. Normal Year: 47"
 Dry Year: 34"
 Wet Year: 61"

b. January: 29°F
 July: 72°F

c. 235 days. Last killing frost: 5/5; first killing frost: 10/5

F. Div. of Parks and Forestry:

Great Piece Meadows
 Troy Meadows Natural Area
 Essex County:
 West Essex Park
 Morris County:
 Tourne Park
 Boonton Reservoir:
 Municipal Watershed

H. Doremus House, Towaco

I. Water Well Records

Location	Owner	Year Drilled	Screen Setting or Depth of Casing	Total Depth	g/m Yield	Formation
25-04-123	Montville Twp. M.U.A.	1973	249	252	120	Qsd
25-04-133	Town of Boonton			12	0	Q
25-04-136	"			113	100	"
25-04-136	"			64	0	"
25-04-156	Town of Boonton (Well point System)	1964		55	600	Qsd
25-04-159	Town of Boonton	1958	75	100	300	"
25-04-178	Boro of Mountain Lakes			50	200	Q
25-04-178	"			58	232	"
25-04-216	Air Craft Radio Corp.	1955	65	80	150	Qsd
25-04-295	Drew, E.F. & Co.			305	190	Q
25-04-296	"			110	100	"
25-04-296	"			402	100	"
25-04-354	S.B. Penick & Co.	1970	67	252	75	PE
25-04-371	Drew, E.F. & Co.			313	235	"
25-04-371	"			505	25	"
25-04-374	"			416	13	"
25-04-422	Boro of Mountain Lakes			186	-	Q-PE
25-04-429	Hillcrest Water Co.			469	140	PE
25-04-429	"			422	85	"
25-04-429	Boro of Mountain Lakes			58	589	Q
25-04-429	"			60	500	"
25-04-429	"			60	500	"
25-04-445	"	1969	260	333	1200	Qsd
25-04-446	"	1966	300	345	437	"
25-04-446	"			257	-	Q
25-04-446	"			137	-	"
25-04-467	"	1964	61	207	128	PE
Δ 25-04-489	International Pipe & Ceramics	1963	141	160	831	Qsd
Δ 25-04-489	U.S.G.S.			80	-	Q
Δ 25-04-489	"			81	-	"
Δ 25-04-497	International Pipe & Ceramics	1963	161	200	350	Qsd
25-04-524	Norda Essential Oil & Chem.Co.			822	38	PE
25-04-524	"			385	220	"
25-04-574	Parsippany-Troy Hills,Twp.of			179	100	Q
25-04-578	"	1958	105	138	600	Qsd
25-04-587	"			82	500	Q
25-04-587	"			150	150	"
25-04-596	"			85	-	"
25-04-598	"	1973	60-85	96	1100	Qsd
25-04-626	Knoll Golf Club			240	90	Trb
25-04-635	Charles Ackerman (for school)	1953	43	100	70	PE
25-04-674	Twp.of Parsippany-Troy Hills			107	-	Q
25-04-677	"			80	1000	"
Δ 25-04-723	"			169	100	Trb
Δ 25-04-771	Lwewellen Farms Restaurant			210	0	Q
Δ 25-04-785	Parsippany-Troy Hills Water Dept.	1975	114-134	172	620	Qsd
Δ 25-04-785	"	1974	89-109	112	453	"
Δ 25-04-793	"	1964	66	75	0	Trb

Δ	25-04-796	U.S.G.S.	1965		89	255	Trb
Δ	25-04-798	"	1966		84	500	"
	25-04-813	Leeming-Pacquin	1967	65	80	430	Qsd
	25-04-815	Parsippany-Troy Hills	1966	70	100	525	"
Δ	25-04-847	U.S.G.S.			79	-	Q
	25-04-851	Twp.of Parsippany-Troy Hills			92	-	"
	25-04-851	"	1958	55	65	715	Qsd
	25-04-854	Sunran Corp.	1957	75	95	100	"
	25-04-854	"	1957	52	81	300	"
	25-04-951	Twp.of Parsippany-Troy Hills	1966	36	47	835	"
	25-04-952	U.S.G.S.	1966	-	213	272	"
	25-04-954	Rowe Manufacturing Co.	1955	74	86	400	"
	25-04-957	Twp.of Parsippany-Troy Hills	1965	55	80	530	"
	25-04-976	U.S.G.S.			52	-	Q
	25-04-979	"			64	-	"
	25-04-991	"			109	-	"
	25-05-419	Montville Mun.Utilities	1966	19	293	106	Trb
	25-05-425	John Pellock	1971	20	170	?	"
	25-05-432	Forest Wood Const. Co.	1965	30	275	159	"
	25-05-469	U.S.G.S.			173	-	Q
	25-05-481	Montville Mun. Util.	1966	55	210	70	Trb
	25-05-485	Pine Brook Water Co.	1956	15	300	190	"
	25-05-487	Montville Mun. Util.	1966	34	176	87	"
	25-05-725	Twp.of Parsippany-Troy Hills	1956	54	90	350	Qsd
	25-05-725	"			70	900	Q
	25-05-739	O'Dowd Dairies			530	77	Q-Trb
	25-05-776	Twp. of East Hanover	1966	118	285	440	Trb

J. Geodetic Control Survey monuments described
Index Maps 14,20; adjacent Index Maps 13,19

A. Bernardsville, Chatham, Mendham, Morristown

B. Passaic-Rockaway, Upper Passaic, Whippany

C. 1. Morris Plains - Non-recording temperature and precipitation gauges

2. Map No.	Location	Period of Record
9	Passaic River at Bernardsville	1967-
17	Whippany River at Pocahontas Dam, Morristown	3/12/36
18	Whippany River at Morristown	1921
3.	9 Passaic River at Bernardsville	1968
	18 Whippany River at Morristown	

Water Quality Standards: (explained in Atlas Sheet description) FW2

D. Brunswick Formation (Trb), Triassic Conglomerates (Trc), Basalt Flows (Trbs), amphibolite (am), skarn (sk), pyroxene gneiss (px), hornblende granite with pyroxene gneiss (gh)

E. 1. Physiographic Province: New England (Reading Prong)

Subdivision: N.J. Highlands

Major Topographic Features: Passaic Range, Mendham Mountain

Elevations (ft. above sea level): ridges 1000, valleys 300

Relief (ft.): 700

Physiographic Province: Piedmont

Subdivision: Triassic Lowlands

Major Topographic Features: Wisconsin Terminal Moraine, Red Sandstone Plain, Hook Mountain, Passaic Valley

Elevations (ft. above sea level): ridges 450, valleys 300

Relief (ft.): 150

2. a. Normal Year: 49"

Dry Year: 39"

Wet Year: 62"

b. January: 28°F

July: 72°F

c. 234 days. Last killing frost: 5/5; first killing frost: 10/15

F. Morris County:

James Andrews Memorial Park

Lewis Morris Park

Loantaka Brook Reservation

Morristown Water Department:

Municipal Watershed

G. National Park Service:

Morristown National Historical Park

U.S. Fish and Wildlife Service:

Great Swamp National Wildlife Refuge

H. Morristown:

Morristown National Historical Park
 Womens Club of Morristown
 Thomas Nast House
 George Vail House
 Acorn Hall

I. Water Well Records

<u>Location</u>	<u>Owner</u>	<u>Year Drilled</u>	<u>Screen Setting or Depth of Casing</u>	<u>Total Depth</u>	<u>g/m Yield</u>	<u>Formation</u>
25-13-118	Twp. of Randolph	1962	75	130	440	Pe
25-13-134	"	1963	54	218	250	"
25-13-236	Town of Morristown	1966	51	150	192	"
25-13-313	State of N.J., Greystone Park	1967	114	270	173	"
25-13-314	N.J. State Hospital	1966	115	224	75	"
25-13-314	State of N.J., Greystone Park	1967	119	298	105	"
25-13-317	Town of Morristown	1968	68	147	350	"
25-13-317	City of Morristown			135	-	Pe
25-13-318	Morris Plains State Hosp.			135	167	"
25-13-319	"			137	400	"
25-13-322	Pineview Homes, Inc.	1967	21	200	112	"
25-13-324	"	1967	21	250	85	"
25-13-328	Morris Plains State Hosp.			137	450	Q
25-13-328	"			70	118	"
25-13-328	"			163	300	"
25-13-333	Town of Morristown	1966	71	80	1	"
25-13-365	"	1966	87	234	175	"
25-13-388	Morey-LaRue Laundry			250	160	Pe
25-13-487	Jockey Hollow Club			187	70	"
25-13-512	R. E. Tucker			314	100	"
25-13-555	Otto Kaush			177	90	Q
25-13-626	T. Vail			301	75	Trb
25-13-627	All Souls Hospital	1958	66	506	205	Pe
25-13-637	Town of Morristown	1966	86	442	275	"
25-13-661	Morristown Trust Co.			300	300	Trb
25-13-663	Beneficial Properties, Inc.	1955	206	500	150	Trb
25-13-696	City of Morristown			-	0	Q
25-13-699	"			-	0	"
25-13-835	"			82	350	"
25-13-835	"			94	650	Trb
25-13-857	Lakeshore Water Co.	1930		152	125	Trbs
25-13-873	"	1952		223	100	Trbs-Trb
25-13-949	New Vernon Vol. Fire Co.	1971	48	179	80	Trb
25-13-981	Frank Kelly			156	73	Trbs
25-13-985	H. Bayne (Bridge Hill Farm)			495	4	Trbs-Trb
25-13-985	"			406	4	"
25-13-992	B. Cutler			290	90	"

J. Geodetic Control Survey monuments described
 Index Maps 19, 20, 24, 25

- A. Caldwell, Chatham, Morristown, Roselle
- B. Arthur Kill-Rahway
Passaic-Upper Passaic, Whippany
- C. 1. Canoe Brook - Non-recording precipitation, evaporation, and temperature gauges

2. Map No.	Location	Period of Record
12	Canoe Brook near Summit	1930-1960
18	Whippany River at Morristown	1921-
3. 18	Whippany River at Morristown	-
244	Passaic River at Chatham (Rt.24)	1964-
258	Whippany River at Rockaway Neck	1965-

Water Quality Standards: (explained in Atlas Sheet description) FW2

- D. Brunswick Formation (Trb), Basalt Flows (Trbs)
- E. 1. Physiographic Province: Piedmont
Subdivision: Triassic Lowlands
Major Topographic Features: Wisconsin Terminal Moraine, Red Sandstone Plain, Passaic Valley
Elevations (ft.above sea level): ridges 450, valleys 180
Relief (ft.): 250
- 2. a. Normal Year: 49"
Dry Year: 43"
Wet Year: 61"
- b. January: 29°F
July: 72°F
- c. 238 days. Last killing frost: 5/5; first killing frost: 10/15

F. Division of Parks and Forestry:

Troy Meadows Natural Area
Essex County:
West Essex Park
Union County:
Passaic River Park
Morristown Water Department:
Municipal Watershed
East Orange:
Municipal Watershed
Chatham Borough:
Municipal Watershed
Commonwealth Water Co.:
Private Water Shed

G. National Park Service:

Morristown National Historical Park
U.S.Fish and Wildlife Service:
Great Swamp National Wildlife Refuge

I. Water Well Records

<u>Location</u>	<u>Owner</u>	<u>Year Drilled</u>	<u>Screen Setting or Depth of Casing</u>	<u>Total Depth</u>	<u>g/m Yield</u>	<u>Formation</u>
25-14-121	New Jersey Bell Telephone	1966	200	198	85	Trb
25-14-123	The Mennen Co.	1968	87	110	100	Q
25-14-123	Morristown, City of			136	1000	"
25-14-129	The Mennen Co.	1968	60	100	300	"
25-14-131	Town of Morristown	1955	144	144	1550	"
25-14-131	"			115	0	"
25-14-136	Whippany Paper Board Co.	1966	100	193	26	Trb
25-14-138	Allied Chemical Co.			67	204	Q
25-14-139	"			345	10	Trb
25-14-162	Whippany Paper Board Co.			97	550	"
25-14-163	"			72	560	"
25-14-163	"	1974	61-66	66	No test	Qsd
25-14-163	"	1974	43-63	63	626	"
25-14-167	Rayonier Inc.	1955	109'4"	129	320	Trb
25-14-174	Wallace & Tiernan	1967	183'9-1/2"	500	104	"
25-14-176	U.S.Geological Survey	1967	76	148	105	Q
25-14-177	Tech-Art Plastics Co.	1961	143	163	70	"
25-14-178	T. Landi & Son	1955	39	48	90	"
25-14-188	Mepco Inc.	1966	140	140	168	"
25-14-189	Weinberger, N.	1966	211	219	22	"
25-14-236	Rowe Mfg. Co.			400	15	Trb
25-14-238	Suburban Propane Gas Co.	1963	65	75	120	Q
25-14-242	McEwan Bros.			50	900	"
25-14-242	"			50	400	"
25-14-242	Whippany Paper Board Co.			50	40	Trb
25-14-243	"	1960	91	400	325	"
25-14-253	"	1964	55	500	45	"
25-14-261	"			530	50	"
25-14-261	"			985	50	"
25-14-298	City of Morristown			122	1500	Q
25-14-316	U.S.Geological Survey	1966		110		"
25-14-319	First Marketing Corp.	1965	81	120	349	"
25-14-327	Hanover Sewerage Auth.			50	110	"
25-14-347	Aquex Dev. & Sales Corp.			118	125	"
25-14-347	Route 10 Gas Station			78	150	"
25-14-348	Twp. of East Hanover			130	484	"
25-14-349	"			115	1500	"
25-14-355	Jersey Central Power & Light			600	170	Trb
25-14-355	"			40	1500	Q
25-14-362	Calculgraph Co.	1959	96'5"	106	146	"
25-14-365	Gate Haven Cemetery			303	300	Q-Trb
25-14-372	Sandoz Pharmaceutical Co.	1966	112	132	524	Q
25-14-372	U.S.Geological Survey	1966	113	122	360	"
25-14-373	Sandoz Pharmaceutical Co.			85	521	"
25-14-377	U.S.Geological Survey	1966	60'+3'	69	317	"
25-14-377	"	1966	101'5-1/2"	112	348	Trb
25-14-392	Two Guys from Harrison	1962	70	70	400	Q
25-14-422	Johnson & Johnson			602	37	Trb
25-14-423	Desiderio, T.			855	45	"
25-14-425	Allied Chemical Co.			188	517	Q

25-14-431	Morristown Memorial Hospital	1956	187'6"	504	290	Trb
25-14-441	"	1959	147'9"	507	325	"
25-14-442	Morristown Water Co.	1966	124	496	420	Trb
25-14-444	City of Morristown			-	0	"
25-14-453	Allied Chemical Corp.	1969	185/203	253	329	Q
25-14-464	Morris Co. Golf Club			306	72	"
25-14-466	"			306	72	"
25-14-473	Moore, P.			270	70	Trb
25-14-496	Parsippany-Troy Hills Twp. Water Dept.	1973	80-100	107	602	Qtm
25-14-511	City of Morristown			99	0	Q
25-14-514	Blanchard Securities Inc.	1954	114'3"	134	220	"
25-14-514	"	1954	111	133	350	"
25-14-517	Farmer's & Consumer's Dairy			118	114	"
25-14-531	City of Morristown			124	1016	"
25-14-532	Driver, Wilbur, Co.	1962	107	107	1350	"
25-14-532	U.S.Geological Survey	1966	99	108	329	"
25-14-536	"	1965	53	61	-	"
25-14-545	College of St.Elizabeth			590	90	Trb
25-14-563	Boro of Florham Park	1952	100/110	120	210	Q
25-14-563	Burden			119	222	"
25-14-563	Boro of Florham Park	1941	68/80	81	440	"
25-14-565	"	1928	47/65	100	187	"
25-14-566	"	1928	7/75	75	400	"
25-14-572	Twombly, A.M.K.			487	165	Q-Trb
25-14-573	Esso Research & Eng.Co.	1967	78	88	100	Q
25-14-575	Twombly, A.M.K.			300	160	Q-Trb
25-14-587	Boro of Madison	1955	124	160	1353	Q
25-14-629	Boro of Florham Park	1968	55/65	135	310	"
25-14-629	Automatic Switch Co.			272	170	Trb
25-14-639	Allied Chemical Corp.	1960	154'9"	175	310	Q
25-14-641	Boro of Florham Park	1964	67/103	103	735	"
25-14-641	"	1964	89/100	100.6	108	"
25-14-644	U.S.Geological Survey			85	-	Q-Trb
25-14-664	Boro of Florham Park	1952	82/89	128	80	Q
25-14-664	Florham Park	1968	-	78	0	Trb
25-14-666	U.S.Geological Survey	1967		55	-	Q-Trb
25-14-682	"			125	205	Q
25-14-698	City of East Orange	1958	93'4"	130	1080	Q
25-14-698	East Orange Bd.of Water Comm.	1974	85-123	130	1000	Qsd
25-14-724	City of Morristown	1959		18	0	Trbs
25-14-744	Heald, O.A.			516	22	Trb
25-14-814	Dodge, H.			95	175	Q
25-14-817	Boro of Madison			249	No Test	"
25-14-817	"			289	"	Q-Trb
25-14-822	"	1956	124	181	1248	Q
25-14-836	"	1966	107	250	30	Trb
25-14-847	Madison Golf Club	1966	266	420	157	"
25-14-886	Judge Lathrop			165	0	"
25-14-887	Commonwealth Water Co.			150	-	"
25-14-932	City of East Orange	1958	81	124	1080	"
25-14-933	"			214	120	"
25-14-933	"			158	100	"
25-14-933	"			295	94	"
25-14-935	"	1958	84'9"	130	1000	"
25-14-935	"	1958	86'10"	120	1000	"
25-14-936	"			133	1000	"

25-14-944	Boro of Madison			130	824	Trb
25-14-944	"	1967	159	178	310	"
25-14-944	"			130	622	Q
25-14-944	"			131	650	"
25-14-944	"			140	580	"
25-14-949	Boro of Chatham			162	-	"
25-14-949	Ruzicka Greenhouse			123	204	"
25-14-949	Boro of Chatham			143	1200	"
25-14-949	"	1956	94	150	1200	"
25-14-949	"			143	700	"
25-14-951	U.S.Geological Survey	1966	63	90	95	"
25-14-959	Commonwealth Water Co.			124	-	"
25-14-967	Minisink Golf Club	1955	122	210	200	Trb
25-14-983	U.S.Geological Survey	1967	142	197	201	Q
25-14-992	Commonwealth Water Co.	1955	88	119	1018	"
25-14-995	"	1955	102'6"	149	1240	"
25-14-998	"			94	-	"
25-15-115	Oldham, Kenneth	1954	63	63	75	"
25-15-144	Valley Concrete			350	100-	Trb
25-15-153	Fritsche Bros.	1969	136	533	455	"
25-15-155	Hanover Greens Water Co.	1960	139'1"	270	70	"
25-15-158	Twp. of Livingston	1960	-	101	-	Q
25-15-159	"	1955		122	-	"
25-15-165	Fritsche Bros.	1968	121'6"	643	164	Trb
25-15-167	Twp. of Livingston	1955		129	-	Q
25-15-176	Valley View Golf Club	1965		300	130	Trb
25-15-183	Twp. of Livingston	1955	43	83	700	Q
25-15-187	G.V. Controls	1958	83/98	300	165	Trb
25-15-412	Twp. of Livingston	1965		63	-	Q
25-15-413	Chatham Electronics Corp.			301	365	Trb
25-15-413	Twp. of Livingston			204	175	"
25-15-416	"	1965	68	75	-	"
25-15-422	Daven Co.	1955	175	450	55	Q-Trb
25-15-422	"			190	5	"
25-15-423	"	1955	29'7"	33	100	Trb
25-15-423	"	1955	43'6"	60	212	"
25-15-425	Twp. of Livingston	1964	114/177	181	-	"
25-15-426	"	1964	161'9"/124'8"	176	-	"
25-15-433	"	1964	123	140	-	"
25-15-434	"	1965	74'8"	132	160	Q
25-15-434	"			76	300	"
25-15-437	Sandoz Pharmaceutical	1966	91'6"	101	289	"
25-15-451	Twp. of Livingston	1965	126	136	-	"
25-15-452	"	1966	63'1"	118	40	"
25-15-453	"			99	-	"
25-15-462	"			161	87	Trb
25-15-489	Leemac Construction Co.			284	125	"
25-15-726	East Orange Water Dept.			190	300	"
25-15-727	"			200	300	"
25-15-729	"			180	300	"
25-15-742	Orange Products Co.	1965	106	135	602	Q

25-15-745	Commonwealth Water Co.	1954		116	-	Q
25-15-748	"			150	328	"
25-15-765	East Orange Water Dept.			125	1400	"
25-15-766	"	1958	80'1-1/2"	128	760	"
25-15-767	"			130	0	"
25-15-768	"			130	1400	"
25-15-773	Commonwealth Water Co.			166	-	"
25-15-776	"			165	-	"
25-15-776	"			133	-	"
25-15-781	"			158	200	"
25-15-782	"	1954	115"9"	162	850	"
25-15-783	"			90	1580	"
25-15-793	"			190	-	Q-Trb
25-15-797	"			283	0	"

J. Geodetic Control Survey monuments described
Index Maps 20,25

SUBJECT TO REVISION

WATER WITHDRAWAL
POINTS AND
NJGS CASE INDEX
SITES WITHIN
5.0 MILES OF:

LATITUDE 404847
LONGITUDE 742926

DRAFT

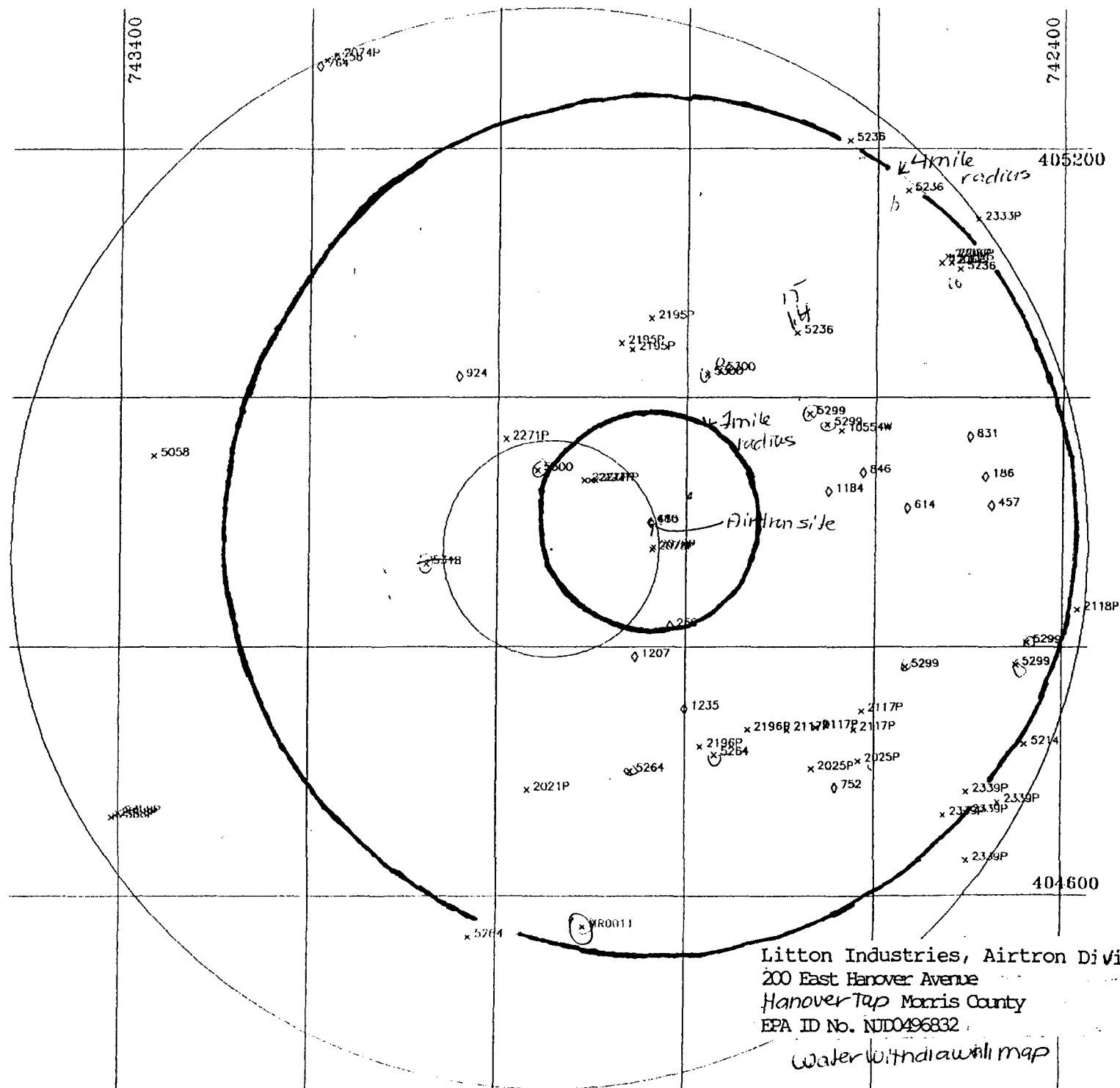
SCALE: 1:63,360
(1 Inch = 1 Mile)

* WATER WITHDRAWAL POINTS
O NJGS CASE INDEX SITES
MILE AND 5 MILE RADII INDICATED

NJGS CASE INDEX DATA RETRIEVED FROM:
NEW JERSEY GEOLOGICAL SURVEY
ON 12/22/87

PLOT PRODUCED BY:
NJDEP
DIVISION OF WATER RESOURCES
BUREAU OF WATER ALLOCATION
CN-029
TRENTON, NJ 08625

DATE: 08/27/88



SUBJECT TO REVISION

NUMBER	NAME	SOURCEID	LOCID	LAT	LON	LLACC	DISTANCE	COUNTY	MUN	DEPTH	GEO1	GEO2	CAPACITY
10054W	NEW JERSEY BELL TELEPHONE	2513372	1	404944	742922	F	2.9	27	12	198	GOSD		120
2021P	SPRING BROOK COUNTRY CLUB	FOND	1	404651	742940	F	2.2	27	24		SP		600
2025P	MORRIS COUNTY GOLF CLUB	2510487	1	404705	742610	F	3.5	27	24	271	GOSD		150
2074P	MORRIS COUNTY GOLF CLUB	2516215	2	404701	742640		3.2	27	24	238	GOSD		15
	HOMNET TURBINE COMPONENTS CORP	2503494	1	405045	743145		5.0	27	35	50	GOSD		400
	HOMNET TURBINE COMPONENTS CORP	2514562	2	405045	743145		5.0	27	35	125	GOSD		400
2070P	MENNEN COMPANY	2501891	1	404947	742922	F	0.9	27	22	85	GOTM		200
	MENNEN COMPANY	2513682	2	404848	742921	F	0.9	27	22	100	GOTM		200
2117P	ALLIED CORPORATION	2504286	1	404721	742637		3.0	27	22	767	GTRB		100
	ALLIED CORPORATION	2507253	2	404729	742608		3.3	27	22	172	GOSD		410
	ALLIED CORPORATION	2515313	4	404720	742635		2.8	27	22	203	GOSD		430
	ALLIED CORPORATION	2522302	10	404720	742613		3.3	27	22	195	GOSD		300
2118P	SANDUZ INC.	2513925	5	404618	742950		4.9	27	10	132	GOSD		500
2190P	WARNER LAMBERT COMPANY	2500695	3	405026	742842		2.0	27	23	102	GOSD		150
	WARNER LAMBERT COMPANY	2507447	4	405023	742835		2.0	27	23	70	GOSD		250
	WARNER LAMBERT COMPANY	2501274	6	405023	742823		2.3	27	23	102	GOSD		500
2196P	MORRISTOWN MEMORIAL HOSPITAL	2505647	1	404720	742720		2.5	27	24	504	GTRB		300
	MORRISTOWN MEMORIAL HOSPITAL	2506577	2	404712	742750		2.3	27	24	507	GTRB		300
2206P	PFIZER, INC.-CONSUMER PRODUCTS	2506488	1	405105	742512	F	4.5	27	29	95	GOSD		275
	PFIZER, INC.-CONSUMER PRODUCTS	2511876	3	405105	742518	F	4.5	27	29	85	GOSD		450
	PFIZER, INC.-CONSUMER PRODUCTS	4502256	4	405108	742514	F	4.6	27	29	85	GOSD		450
	PFIZER, INC.-CONSUMER PRODUCTS	2514192	5	405108	742512	F	4.6	27	29	80	GOSD		450
2271P	GREYSTONE PARK PSYCHIATRIC HOS	4500039	WELL NO. 1	404920	742905		0.7	27	23	139	GOSD		300
	GREYSTONE PARK PSYCHIATRIC HOS	4500039	WELL NO. 2	404920	742901		0.7	27	23	125	GOSD		300
	GREYSTONE PARK PSYCHIATRIC HOS	2509493	WELL NO. 3	404920	742858		0.8	27	23	139	GOSD		500
	GREYSTONE PARK PSYCHIATRIC HOS	2506827	WELL NO. 4	404920	742856		0.8	27	23	58	GOSD		100
	GREYSTONE PARK PSYCHIATRIC HOS	2514303	WELL #1-67	404940	742953		1.1	27	29	298	GTRB		150
	GREYSTONE PARK PSYCHIATRIC HOS	2514417	WELL #2-67	404940	742953		1.1	27	29	270	GTRB		200
2233P	BOOTHBY ELECTRONICS	2525494	5	405126	742455	F	5.0	27	29	78	GTRB		200
2239P	EXXON RESEARCH & ENGINEERING	2500067	1	404650	742500		4.5	27	11	100	GOTM		1070
	EXXON RESEARCH & ENGINEERING	2515953	3	404645	742440		4.8	27	11	120	GOTM		
	EXXON RESEARCH & ENGINEERING	2506994	1	404617	742500		4.8	27	11	100	GOTM		1030
	EXXON RESEARCH & ENGINEERING	2514628	2	404629	742515		4.4	27	11	68	GOTM		24
	EXXON RESEARCH & ENGINEERING	4500326	4	404640	742500	U	4.6	27	11		GOTM		
2250P	MENDHAM GOLF AND TENNIS CLUB	2514479	WELL #1	404639	742402		4.7	27	19	75	GOTM		50
	MENDHAM GOLF AND TENNIS CLUB	2514799	WELL #2	404638	742404		4.7	27	19	50	GOTM		140
	MENDHAM GOLF AND TENNIS CLUB	FOND 1		404640	742400		4.7	27	19		G		
	MENDHAM GOLF AND TENNIS CLUB	FOND 2		404640	742400		4.7	27	19		G		
5009	MORRIS COUNTY M.U.A.	2510770	MUSKIE 1	404932	742339		3.8	27		130	GFC		375
5069	MADISON BOROUGH	2504209	C	404524	742554		5.0	27	17	160	GOSD		1200
5214	FLORHAM PARK BOROUGH	4500299	2	404713	742423	S	4.8	27	11	105	GOSU		1000
	FLORHAM PARK BOROUGH	2521204	4	404713	742423	S	4.8	27	11	139	GOSU		1300
5236	PARSIPPANY-TROY HILLS	2507620	7	405102	742506	F	4.6	27	29	66	GOSD		500
	PARSIPPANY-TROY HILLS	2511623	10	405004	742618	F	4.7	27	29	129	GOSD		500
	PARSIPPANY-TROY HILLS	2512718	12	405140	742540	F	4.7	27	29	100	GOSD		300
	PARSIPPANY-TROY HILLS	2513259	14	405031	742650	F	3.0	27	29	98	GOSD		700
	PARSIPPANY-TROY HILLS	2515809	15	405031	742650	F	3.0	27	29	87	GOSD		150
5238	DEWILLE TOWNSHIP WATER DEPT.	2519071	6	405243	743151		5.0	27	32	137	GOTM		700
5264	SOUTHEAST MORRIS COUNTY MUA	2514530	LINDERWOOD	404700	742835		2.2	27	24	261	GTRB		410
	SOUTHEAST MORRIS COUNTY MUA	2512439	TURNBULL	404705	742741		2.4	27	24	492	GTRB		400
	SOUTHEAST MORRIS COUNTY MUA	4500354	SAND SPRG	404740	743017		3.7	27	13	94	GTRB		600
5299	SOUTHEAST MORRIS COUNTY MUA	2500018	WING	404932	742642	F	2.7	27	12	138	GOSD		2500
	SOUTHEAST MORRIS COUNTY MUA	2500327	TOGO	404947	742631	F	2.0	27	12	144	GOSD		1070
	SOUTHEAST MORRIS COUNTY MUA	2514181	BLACK BRK 1	404751	742439		4.5	27	12	124	GOSD		1400
	SOUTHEAST MORRIS COUNTY MUA	2514182	BLACK BRK 2	404751	742432		4.5	27	12	122	GOSD		1400

NUMBER	NAME	SOURCEID	LOCID	LAT	LON	LLACC	DISTANCE	COUNTY	MUN	DEPTH	GEO1	GEO2	CAPACITY
5300	SOUTHEAST MORRIS COUNTY MUA	4500251	NORMANDY	404750	742540		3.5	27	12	80	GOSD		400
	SOUTHEAST MORRIS COUNTY MUA	2514034	SHORELINE	404925	742935	F	0.7	27	22	147	GTRB		400
	SOUTHEAST MORRIS COUNTY MUA	4500316	WELL #1	405013	742739	F	2.3	27	29	60	GOSD		400
5318	MORRIS COUNTY MUA	4500317	WELL #2	405011	742747	F	2.2	27	12	60	GOSD		350
MU0011	ARNOLD FARMS	WASHINGTON	VALLEY RES	404840	742045		1.2	27	22		SFWHI		
		SILVER CREEK	STREAM 1	404545	742905	T	3.5	27	13		SFRUC		

Number of Observations: 61

NUMBER	NAME	SOURCEID	LOCID	LAT	LON	LLAND	DISTANCE	COUNTY	MUN	DEPTH	GE01	GE02	CAPACITY
2358P	MENDHAM GOLF AND TENNIS CLUB	2514799	WELL #2	404438	743404		4.7	27	19	50	G0TH		140
2358P	MENDHAM GOLF AND TENNIS CLUB	2514439	WELL #1	404439	743402		4.7	27	19	75	G0TM		50
2358P	MENDHAM GOLF AND TENNIS CLUB	FOND 1		404440	743400		4.7	27	19		G		
2358P	MENDHAM GOLF AND TENNIS CLUB	FOND 2		404440	743400		4.7	27	19		G		
5058	MORRIS COUNTY M.U.A.	2510770	MUSKER 1	404932	743339		3.8	27		130	GFC		375
5058	DEVILLE TOWNSHIP WATER DEPT.	2519071	6	405243	743151		5.0	27	32	137	G0TH		700
3074P	HOMET TURBINE COMPONENTS CORP	2503494	1	405245	743145		5.0	27	35	50	G0SD		400
3074P	HOMET TURBINE COMPONENTS CORP	2514532	2	405245	743145		5.0	27	35	125	G0SD		400
5010	MORRIS COUNTY MUA	WASHINGTON	→ VALLEY RES	404840	743045		1.2	27	22		SFWH		
5064	SOUTHEAST MORRIS COUNTY MUA	4500350	SAND SPRG	404540	743017		3.7	27	13	94	GTRB		600
2271P	GREYSTONE PARK PSYCHIATRIC HOS	2514303	WELL #1-67	404940	742935		1.1	27	29	298	GTRB		150
2271P	GREYSTONE PARK PSYCHIATRIC HOS	2514417	WELL #2-67	404940	742935		1.1	27	29	270	GTRB		200
2021P	GRANITE BROOK COUNTRY CLUB	FOND	1	404351	742940	F	2.2	27	24		SP		600
5000	SOUTHEAST MORRIS COUNTY MUA	2514034	STEFAN	404925	742935	F	0.7	27	22	147	GTRB		400
2271P	GREYSTONE PARK PSYCHIATRIC HOS	4500303	WELL NO. 1	404720	742945		0.7	27	23	133	G0SD		300
MEM011	AROLD FRANK	STIVER CREEK	STIFAM 1	404545	743005	T	3.5	27	17		SFRCC		
2271P	GREYSTONE PARK PSYCHIATRIC HOS	4500309	WELL NO. 2	404920	742950		0.7	27	23	125	G0SD		300
2271P	GREYSTONE PARK PSYCHIATRIC HOS	2503493	WELL NO. 3	404720	742958		0.8	27	23	139	G0SD		500
2271P	GREYSTONE PARK PSYCHIATRIC HOS	2503507	WELL NO. 4	404920	742958		0.8	27	23	58	G0SD		100
2195P	WARNER LAMBERT COMPANY	2500305	3	405025	742842		2.0	27	23	102	G0SD		150
2195P	WARNER LAMBERT COMPANY	2503447	4	405023	742835		2.0	27	23	70	G0SD		250
5064	SOUTHEAST MORRIS COUNTY MUA	2514520	LIDGERWOOD	404700	742835		2.2	27	24	261	GTRB		410
2195P	WARNER LAMBERT COMPANY	2501274	6	405038	742823		2.3	27	23	102	G0SD		500
2078P	MENNON COMPANY	2501851	1	404547	743022	F	0.9	27	22	85	G0TH		300
2078P	MENNON COMPANY	2513652	2	404548	743021	F	0.9	27	22	100	G0TH		250
2196P	MORRISTOWN MEMORIAL HOSPITAL	2503577	2	404712	742750		2.3	27	24	507	GTRB		300
5040	SOUTHEAST MORRIS COUNTY MUA	4500317	WELL #2	405011	742747	F	2.2	27	12	60	G0SD		350
5064	SOUTHEAST MORRIS COUNTY MUA	2513439	TURNTULL	404708	742741		2.4	27	24	492	GTRB		450
5000	SOUTHEAST MORRIS COUNTY MUA	4500316	WELL #1	405013	742739	F	2.3	27	29	60	G0SD		400
2196P	MORRISTOWN MEMORIAL HOSPITAL	2503547	1	404720	742730		2.5	27	24	504	GTRB		300
2117P	ALLIED CORPORATION	2515313	4	404720	742655		2.8	27	22	203	G0SD		420
5036	PARSIPPANY-TROY HILLS	2513259	14	405031	742650	F	3.0	27	29	90	G0SD		700
5036	PARSIPPANY-TROY HILLS	2515609	15	405031	742650	F	3.0	27	29	87	G0SD		150
5099	SOUTHEAST MORRIS COUNTY MUA	2500048	WING	404952	742642	F	2.7	27	12	138	G0SD		2500
2025P	MORRIS COUNTY GOLF CLUB	2516215	2	404701	742640		3.2	27	24	238	G0SD		15
2117P	ALLIED CORPORATION	2504286	1	404721	742637		3.0	27	22	767	GTRB		100
5099	SOUTHEAST MORRIS COUNTY MUA	2500357	TORO	404947	742631	F	2.8	27	12	144	G0SD		1000
10554W	NEW JERSEY BELL TELEPHONE	2513372	1	404944	742622	F	2.9	27	12	198	G0SD		120
5036	PARSIPPANY-TROY HILLS	2511628	10	405204	742618	F	4.7	27	29	129	G0SD		500
2117P	ALLIED CORPORATION	2502302	10	404720	742613		3.3	27	22	195	G0SD		300
2025P	MORRIS COUNTY GOLF CLUB	2510487	1	404705	742610	F	3.5	27	24	271	G0SD		150
2117P	ALLIED CORPORATION	2507253	2	404729	742603		3.3	27	22	172	G0SD		410
5069	MADISON BOROUGH	2504209	C	404524	742554		5.0	27	17	160	G0SD		1200
5036	PARSIPPANY-TROY HILLS	2512718	12	405140	742540	F	4.7	27	29	100	G0SD		300
5099	SOUTHEAST MORRIS COUNTY MUA	4500351	NORMANDY	404750	742540		3.5	27	12	80	G0SD		400
2206P	PFIZER, INC.-CONSUMER PRODUCTS	2511876	3	405105	742515	F	4.5	27	29	85	G0SD		450
2206P	EXXON RESEARCH & ENGINEERING	2514658	2	404639	742515		4.4	27	11	88	G0TH		24
2206P	PFIZER, INC.-CONSUMER PRODUCTS	4000256	4	405103	742514	F	4.6	27	29	65	G0SD		450
2206P	PFIZER, INC.-CONSUMER PRODUCTS	2506460	1	405105	742512	F	4.5	27	29	95	G0SD		275
2206P	PFIZER, INC.-CONSUMER PRODUCTS	2514192	5 RED WOOD	405103	742512	F	4.6	27	29	60	G0SD		450
5036	PARSIPPANY-TROY HILLS	2507620	7	405102	742510	F	4.6	27	29	66	G0SD		500
2206P	EXXON RESEARCH & ENGINEERING	2500067	1	404650	742500		4.5	27	11	100	G0TH		1000
2206P	EXXON RESEARCH & ENGINEERING	2502994	1	404617	742500		4.6	27	11	100	G0TH		1000
2206P	EXXON RESEARCH & ENGINEERING	4500326	4	404640	742500	U	4.6	27	11		G0TH		
2206P	LOOMYON ELECTRONICS	2503454	5	405126	742505	F	5.0	27	29	78	GTRB		200
2206P	EXXON RESEARCH & ENGINEERING	2515753	3	404645	742440		4.6	27	11				

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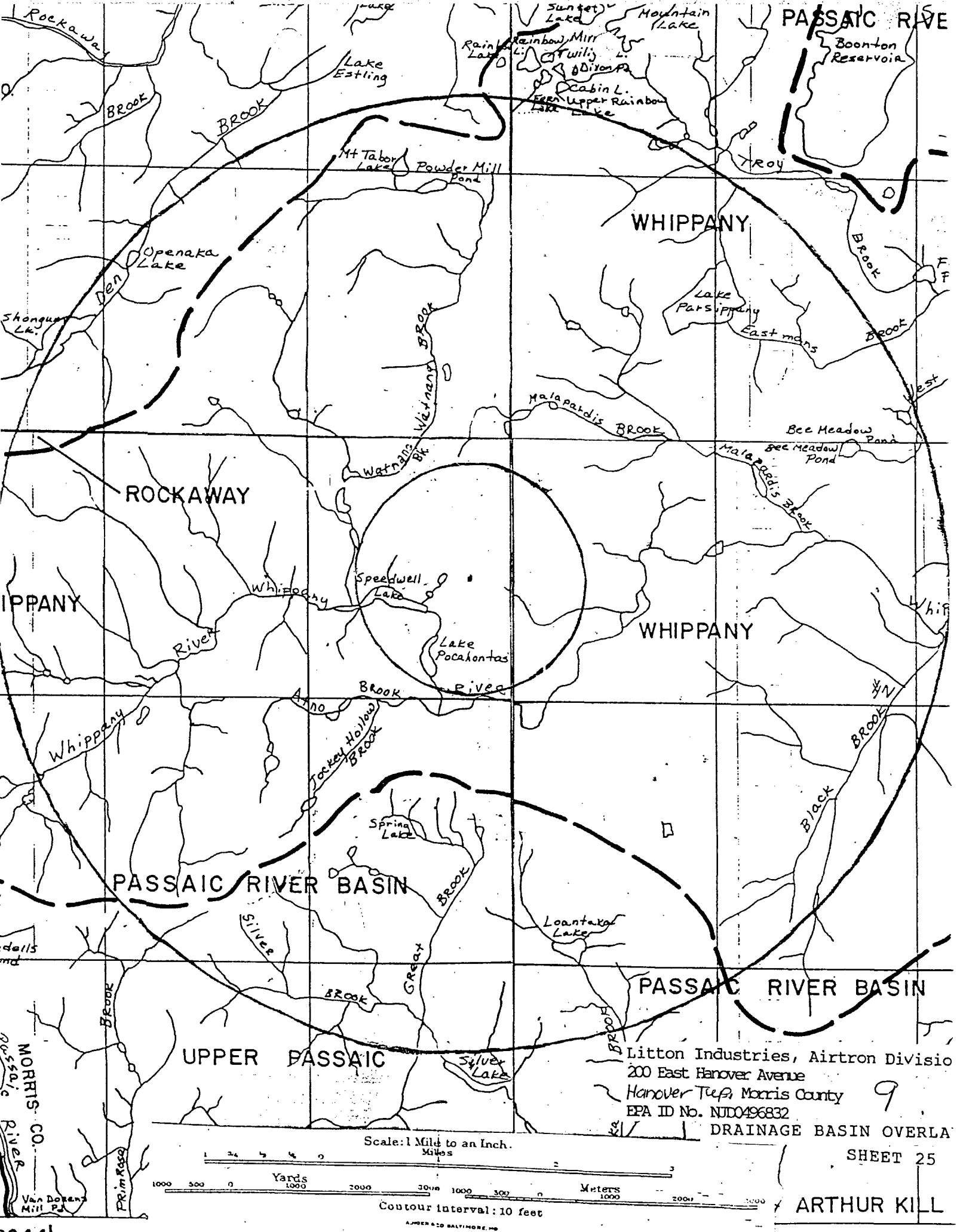
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NUMBER	NAME	SOURCEID	LOCID	LAT	LON	LLAND	DISTANCE	COUNTY	MUN	DEPTH	GE01	GE02	CAPACITY
5099	SOUTHEAST MORRIS COUNTY MUA	2504081	WELL #1	404651	742420		4.0	27	12	124	G0SD		1400
5014	FLORHAM PARK BOROUGH	4500299	2	404713	742415	S	4.6	27	11	105	G0SD		1000
5014	FLORHAM PARK BOROUGH	2511204	4	404713	742415	S	4.6	27	11	105	G0SD		1000
5099	SOUTHEAST MORRIS COUNTY MUA	2514802	FLORHAM 2	404822	742405		4.5	27	12	122	G0SD		1400
2102P	SHAWCO INC.	2511405	5	404818	742400		4.9	27	10	132	G0SD		1400

Page 1 of NJGS CASE INDEX SITES WITHIN 5.0 MILES OF 404347 LAT. 742726 LON. AS OF 12/22/87 (IN ORDER BY SITE NUMBER) - 08/27/88

SITE#	NAME	LAT	LON	DISTANCE	CONTAM	FNCDDE1	FNCDDE2	STATUS1	STATUS2
185	MOBIL STATION, (RAY'S PETROLEUM), WHIFFANY, MORRIS CO.	404922	742449	4.1	51	100	3070	0	
259	CHAMPION INTERNATIONAL, MORRISTOWN, MORRIS CO.	404310	742310	1.3	00	144	3070	4	
415	AIRTRON LITTON, MORRIS PLAINS, MORRIS CO.	404300	742803	1.0	00	130	3070	2	I
457	BELL LABS, HANDOVER TWP., MORRIS CO.	404308	742445	4.1	00	130	3070	9	
614	WHIFFANY PAPER BOARD COMPANY, HANDOVER TOWNSHIP, MORRIS CO.	404907	742539	3.3	50	113	3070	9	
630	NEENAH CO., MORRIS PLAINS, MORRIS CO.	404900	742820	1.0	0	0130	0	1	
752	ST. ELIZABETH COLLEGE, CHIMENT STATION, MORRIS CO.	404652	742605	3.4	70	130	144	0	
764	DENVILLE MUNICIPAL WELL CONTAMINATION, DENVILLE, MORRIS CO.	405240	743155	5.0	00	0130	0	1	I
831	ROME INT'L, WHIFFANY, MORRIS CO.	404941	742459	4.0	00	0110	3070	1	B
846	VAN DYK RESEARCH CORP., MORRIS CO.	404924	742406	3.0	0	0	0	1	B
924	NU PSYCH. INS.-GREYSTONE, PAR-TROY, MORRIS CO.	405010	743025	1.8	0	0130	0	1	
1184	OLSON PRESERVATIVE & PAINT CORP., HANDOVER TWP., MORRIS CO.	404915	742630	2.6	00	0100	3070	1	B
1207	WALTON TEXACO, WASHINGTON & PHOENIX ST., MORRISTOWN, MORRIS CO.	404755	742832	1.3	51			3	
1235	ALLIED SAFETY, MORRIS TOWN, MORRIS CO.	404730	742760	1.9	00	0130	3070	4	G

Number of Observations: 14

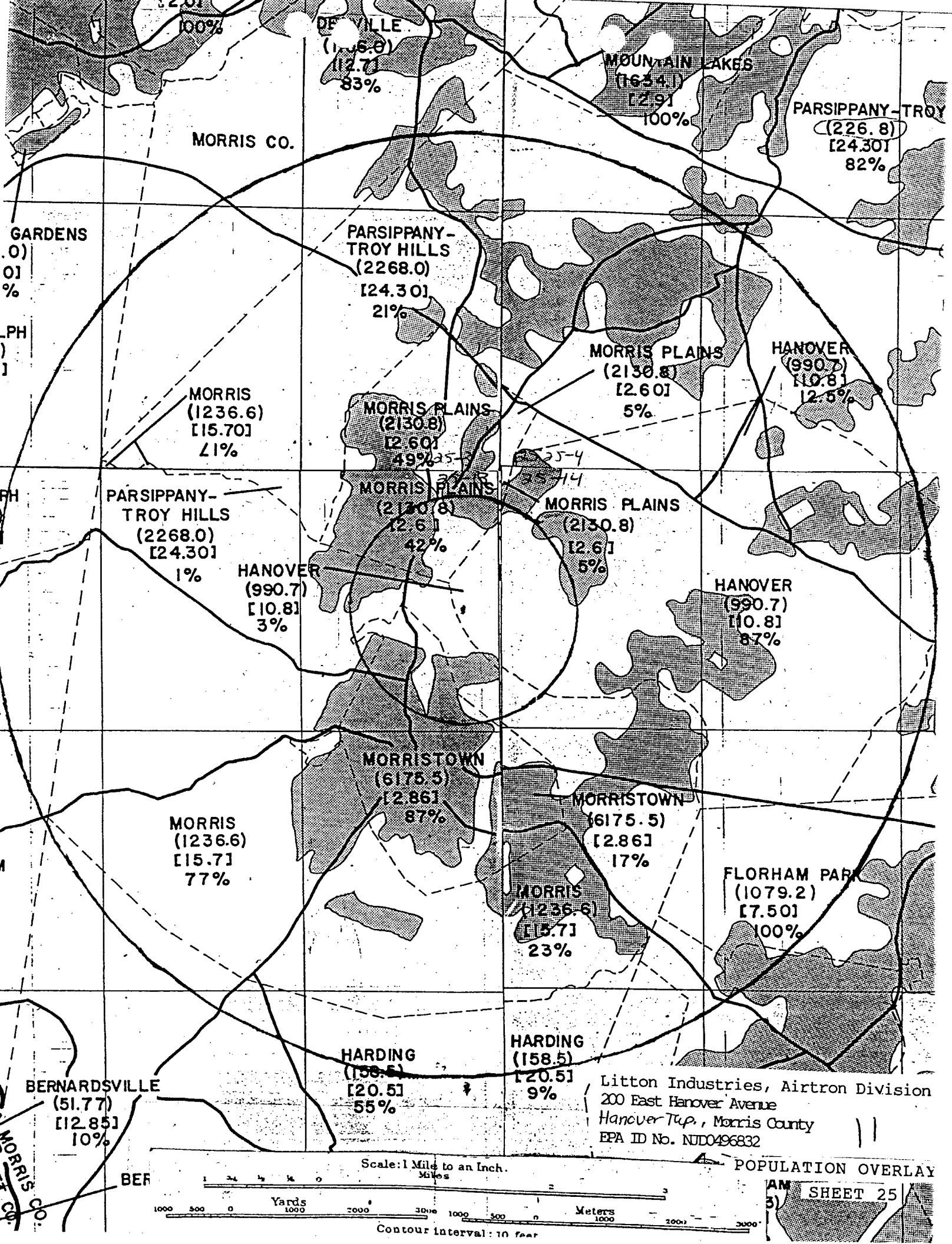


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Litton Industries, Airtron Division
200 East Hanover Avenue
Hanover Twp, Morris County
EPA ID No. NJD0496832
Morristown Qud

WETLANDS MAP



Townley

CHEMISTRY • MICROBIOLOGY
RELATED SCIENCES

RESEARCH AND CONSULTING C.

1750 W. FRONT STREET, PLAINFIELD, N. J. 07063 • (201) 757-1137

*cel 9/23/87
m.f. 13*

April 27, 1987

Airtron
200 East Hanover Ave.
Morris Plains, NJ 07950

Packing List No. 16327

Attn: Mr. Leon Pieta

Gentlemen:

Herewith our findings for the analysis of one sample each of sludge and cake, received here April 2, 1987:

Figures generally in mg/kg	TRC Sample: 2814 Source: <u>Sludge</u>	2815 <u>Filter Cake</u>
Total Solids, %	4.83	45.1
Oil & Grease	- -	410
COD	- -	16,200
Cyanide, total	- -	<0.2 nd
Arsenic	- -	24
Cadmium	- -	110
Chromium	- -	15.1
Copper	- -	11,900
Lead	- -	48
Mercury	- -	0.040
Nickel	- -	1600
Silver	- -	4.4
Zinc	- -	1500

Note: nd = none detected

All analyses carried out using procedures currently approved by
USEPA/NJDEP

See attached Forms
T-VWX-010 A & B

Very truly yours,

Mark Andersen
Mark Andersen
Lab Manager

MC1-CODE

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF HAZARDOUS WASTE MANAGEMENT

PAGE 1

WASTE MANIFESTS FROM 01/01/87 TO 10/30/89
FROM GENERATOR NJD030239412 TO SPECIFIED TSDF'S

GENERATOR	TSDF	MANIFEST	DATE SHIPPED	WASTE CODE	WASTE NAME	QUANTITY
<i>Arthur Division</i> LITTON SYS 109 5TH ST CLIFTON, NJ NJD065825341	ATLAS ASSOCIATES					
		NJA0360016	09/02/87	U045	CHLOROMETHANE	55
				D001	CHARACTERISTIC OF IGNITABILITY	220
				X726	OIL/MT/ WRK, TURBN, DESEL, QUENCH	715
				D004	ARSENIC	330
		NJA0387366	11/19/87	D004	ARSENIC	330
				D001	CHARACTERISTIC OF IGNITABILITY	385
				F002	SPT HAL SOLV&STLBTM OF DEGREAS	110
				X726	OIL/MT/ WRK, TURBN, DESEL, QUENCH	330
		NJA0398978	02/16/88	D004	ARSENIC	110
		NJA0398979	02/16/88	F005	NONHL SOLV & STLBTM	110
				F002	SPT HAL SOLV&STLBTM OF DEGREAS	55
				X726	OIL/MT/ WRK, TURBN, DESEL, QUENCH	110
				X900	CHEMICAL PROCESS-LIQUID, NOS	10
		NJA0427344	05/16/88	F005	NONHL SOLV & STLBTM	275
				F002	SPT HAL SOLV&STLBTM OF DEGREAS	110
		NJA0553978	02/22/89	X726	OIL/MT/ WRK, TURBN, DESEL, QUENCH	275
		NYA5565564	03/05/87	D002	CHARACTERISTIC OF CORROSIVITY	275
		NYA7024059	05/09/89	D002	CHARACTERISTIC OF CORROSIVITY	55
				D001	CHARACTERISTIC OF IGNITABILITY	110
				D002	CHARACTERISTIC OF CORROSIVITY	165
				D004	ARSENIC	1000
		NYA7042932	08/09/88	F005	NONHL SOLV & STLBTM	330
				F002	SPT HAL SOLV&STLBTM OF DEGREAS	110
				X726	OIL/MT/ WRK, TURBN, DESEL, QUENCH	220
				D004	ARSENIC	2800
		NYA7147098	11/09/88	D004	ARSENIC	900
				X910	CHEMICAL PROCESS-SOLID, NOS	9500
		NYA7196472	08/17/89	D002	CHARACTERISTIC OF CORROSIVITY	110
		NYA7204266	08/18/89	D004	ARSENIC	600
				D001	CHARACTERISTIC OF IGNITABILITY	440

CHEMICAL MANAGEMENT INC
340 EASTERN PARKWAY
FARMINGDALE, NY
NYD000691949

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NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF HAZARDOUS WASTE MANAGEMENT

PAGE 2

WASTE MANIFESTS FROM 01/01/87 TO 10/30/89
FROM GENERATOR NJD030239412 TO SPECIFIED TSDF'S

GENERATOR	TSDF	MANIFEST	DATE SHIPPED	WASTE CODE	WASTE NAME	QUANTITY
VISION/LITTON SYS OVER AVE AINS, NJ 412	CHEMICAL MANAGEMENT INC 340 EASTERN PARKWAY FARMINGDALE, NY NYD000691949	NYA7204266	08/18/89	D002	CHARACTERISTIC OF COPROSIVITY	165
		NYA7205049	02/22/89	D004	ARSENIC	1000
				D002	CHARACTERISTIC OF CORROSIVITY	385
				D004	ARSENIC	165
				F005	NONHL SOLV & STLBTM	275
	CHEMMET SERVICES INC 18550 ALLEN RD WYANDOTTE, MI MID096963194	MI01061762	05/07/87	D004	ARSENIC	1000
				D004	ARSENIC	110
	ENVIRONMENTAL WASTE REMOVAL 130 FREIGHT STREET WATERBURY, CT CTD072138969	CTC0145392	01/09/89	X900	CHEMICAL PROCESS-LIQUID,NOS	51660
MARISOL INC 125 FACTORY LANE MIDDLESEX, NJ NJD002454544		NJAA631150	08/17/89	F005	NONHL SOLV & STLBTM	715
		NJA0275076	02/18/87	X726	OIL/MT/ WRK,TURBN,DESEL,QUENCH	55
				D001	CHARACTERISTIC OF IGNITABILITY	275
				F001	SPT HAL SOLVESLUDG DEGREAS OPE	55
		NJA0316025	05/06/87	F001	SPT HAL SOLVESLUDG DEGREAS OPE	55
				D001	CHARACTERISTIC OF IGNITABILITY	285
				X726	OIL/MT/ WRK,TURBN,DESEL,QUENCH	330
		NJA0525936	11/09/88	F005	NONHL SOLV & STLBTM	220
				F002	SPT HAL SOLV&STLBTM OF DEGREAS	110
				X726	OIL/MT/ WRK,TUREN,DESEL,QUENCH	55
	NJA0553966	05/09/89	X726	OIL/MT/ WRK,TURBN,DESEL,QUENCH	275	
			F005	NONHL SOLV & STLBTM	275	
PRIDE SOLVENTS & CHEMICAL CO 88 LAMAR STREET WEST BABYLON, NY						

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NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF HAZARDOUS WASTE MANAGEMENT

PAGE 3

WASTE MANIFESTS FROM 01/01/87 TO 10/30/89
FROM GENERATOR NJD030239412 TO SPECIFIED TSDF'S

GENERATOR	TSDF	MANIFEST	DATE SHIPPED	WASTE CODE	WASTE NAME	QUANTITY
VISION/LITTON SYS OVER AVE AINS, NJ 412	PRIDE SOLVENTS & CHEMICAL CO 88 LAMAR STREET WEST BABYLON, NY NYD057722258	NYA3046522	07/01/87	F001	SPT HAL SOLVESLUDG DEGREAS OPE	97
		NYA4171140	03/31/87	F001	SPT HAL SOLVESLUDG DEGREAS OPE	74
		NYA5136066	05/17/88	F001	SPT HAL SOLVESLUDG DEGREAS OPE	30
		NYA5270256	10/19/87	F001	SPT HAL SOLVESLUDG DEGREAS OPE	55
		NYA6293061	02/03/88	F001	SPT HAL SOLVESLUDG DEGREAS OPE	55
				F001	SPT HAL SOLVESLUDG DEGREAS OPE	80
		NYA7189272	10/06/88	F001	SPT HAL SOLVESLUDG DEGREAS OPE	106
		NYA7190055	05/09/89	F001	SPT HAL SOLVESLUDG DEGREAS OPE	50
		NYA7190316	05/09/89	F001	SPT HAL SOLVESLUDG DEGREAS OPE	555

RADIAC RESEARCH CORP
261 KENT AVENUE
BROOKLYN, NY

MARISOL INC
125 FACTORY LANE
MIDDLESEX , NJ
NJ0002454544

NJAA631150	08/17/89	F005	NONHL SOLV & STLBTM	715 G
NJA0275076	02/18/87	X726	OIL/MT/ WRK,TURBN,DESEL,QUENCH	55 G
		0001	CHARACTERISTIC OF IGNITABILITY	275 G
		F001	SPT HAL SOLVESLUDG DEGREAS OPE	55 G
NJA0316025	05/06/87	F001	SPT HAL SOLVESLUDG DEGREAS OPE	55 G
		0001	CHARACTERISTIC OF IGNITABILITY	285 G
		X726	OIL/MT/ WRK,TURBN,DESEL,QUENCH	330 G
NJA0525936	11/09/88	F005	NONHL SOLV & STLBTM	220 G
		F002	SPT HAL SOLVESLUDG DEGREAS OPE	110 G
		X726	OIL/MT/ WRK,TURBN,DESEL,QUENCH	55 G
NJA0553966	05/09/89	X726	OIL/MT/ WRK,TURBN,DESEL,QUENCH	275 G
		F005	NONHL SOLV & STLBTM	275 G

PRIDE SOLVENTS & CHEMICAL CO
88 LAMAR STREET
WEST BABYLON , NY

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF HAZARDOUS WASTE MANAGEMENT

PAGE 3

WASTE MANIFESTS FROM 01/01/87 TO 10/30/89
FROM GENERATOR NJD030239412 TO SPECIFIED TSDF'S

TSDF	MANIFEST	DATE SHIPPED	WASTE CODE	WASTE NAME	QUANTITY
ITTON SYS NJ	PRIDE SOLVENTS & CHEMICAL CO 88 LAMAR STREET WEST BABYLON , NY NYD057722258				
	NYA3046522	07/01/87	F001	SPT HAL SOLVESLUDG DEGREAS OPE	97 G
	NYA4171140	03/31/87	F001	SPT HAL SOLVESLUDG DEGREAS OPE	74 G
	NYA5136066	05/17/88	F001	SPT HAL SOLVESLUDG DEGREAS OPE	30 G
	NYA5270256	10/19/87	F001	SPT HAL SOLVESLUDG DEGREAS OPE	55 G
	NYA6293061	02/03/88	F001	SPT HAL SOLVESLUDG DEGREAS OPE	55 G
			F001	SPT HAL SOLVESLUDG DEGREAS OPE	80 G
	NYA7189272	10/06/88	F001	SPT HAL SOLVESLUDG DEGREAS OPE	106 G
	NYA7190055	05/09/89	F001	SPT HAL SOLVESLUDG DEGREAS OPE	50 G
	NYA7190316	05/09/89	F001	SPT HAL SOLVESLUDG DEGREAS OPE	555 G
	RADIAC RESEARCH CORP 261 KENT AVENUE BROOKLYN , NY NYD049178296				
	NYA5565537	03/05/87	D002	CHARACTERISTIC OF CORROSIVITY	500 P
			D002	CHARACTERISTIC OF CORROSIVITY	500 P
	TECHNIC INC 1 SPECTACLE STREET CRANSTON , RI RID001200252				
	RIB0006635	07/17/89	F007	PLAT SOLU OF ELECTRPLT OPERTN	1265 G
	WRC PROCESSING COMPANY WALNUT LANE RD 1 POTTSTVILLE , PA PAD981038227				
	PAB2363480	02/12/87	F006	WSTWTR SLUDG OF ELECTRPLT OPER	14000 P
	PAB4102560	05/03/88	F006	WSTWTR SLUDG OF ELECTRPLT OPER	24740 P
	PAB4102571	08/04/88	F006	WSTWTR SLUDG OF ELECTRPLT OPER	22386 P
	PAB4102582	11/04/88	F006	WSTWTR SLUDG OF ELECTRPLT OPER	20964 P
	PAB4102604	04/28/89	F006	WSTWTR SLUDG OF ELECTRPLT OPER	14 CY
	PAB4102615	11/13/87	F006	WSTWTR SLUDG OF ELECTRPLT OPER	18200 P

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF HAZARDOUS WASTE MANAGEMENT

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WASTE MANIFESTS FROM 01/01/87 TO 10/30/89
FROM GENERATOR NJD030239412 TO SPECIFIED TSDF'S

R	TSDF	MANIFEST	DATE SHIPPED	WASTE CODE	WASTE NAME	QUANTITY
ITTON SYS NJ	WRC PROCESSING COMPANY WALNUT LANE RD 1 POTTSVILLE, PA PAD981038227	PAB4102626	08/02/89	F006	WSTWTR SLUDG OF ELECTRPLT OPER	27051 P
		PAB4102630	06/17/87	F006	WSTWTR SLUDG OF ELECTRPLT OPER	22400 P
		PAB4102641	09/09/87	F006	WSTWTR SLUDG OF ELECTRPLT OPER	19600 P
		PAB4102652	02/08/88	F006	WSTWTR SLUDG OF ELECTRPLT OPER	16650 P
		PAB4102663	01/31/89	F006	WSTWTR SLUDG OF ELECTRPLT OPER	22257 P
		PAB4102674	04/15/87	F006	WSTWTR SLUDG OF ELECTRPLT OPER	22400 P

LE RECORDS READ
EMS RECORDS READ

Handwritten notes:
P
100-100000-100000
Hoffman
100-100000-100000

RECEIVED



LAMBDA / AIRTRON

DIVISION OF LITTON SYSTEMS, INC.
MS&E

200 EAST HANOVER AVENUE, MORRIS PLAINS, NEW JERSEY 07950 • (201) 539-5300

June 8, 1979

RECEIVED

JUN 14 1979

Mr. Jeffrey Hoffman
State of New Jersey
Dept. of Environmental Protection
Division of Water Resources
Trenton, New Jersey 08625

DEPT. ENVIRONMENTAL PROTECTION
NEWARK OFFICE

Reference: On-Site Industrial Inspection of February 13, 1979;
NPDES No. NJ 0025739, Status of Sludge Beds

Gentlemen:

In reply to the above referenced inspection concerning the present status of our sludge beds, we would like to provide you with the following brief written report and information. These data apply to the last half of your letter to Airtron on April 24, 1979.

Item 1 - Topographical Site Plan

Figure 1 is a general topographical map showing the location of Airtron in relation to the surrounding areas. Figure 2 is an enlarged topographical map of Airtron which shows the buildings, four sludge beds, settling tank, discharge ditch, and associated piping.

Item 2 - Dimensions of Sludge Beds

Table I lists the dimensional data of our four sludge beds identified on the site plan of Figure 2. Water levels and sludge depths from the sampling date of May 16, 1979 (Note 1) are also tabulated. A brief description of the construction detail of each bed is given in Note 2.

Item 3 - Soil Conditions and Water Level

Two copies of test pit data taken adjacent to the Airtron Plant are enclosed. These data indicate the general soil conditions. From the enclosed elevation map (Figure 3) and test pit map (Figure 4), you may see that the Test Pits 13 and 15 are 21 feet below the plant

C-1
102

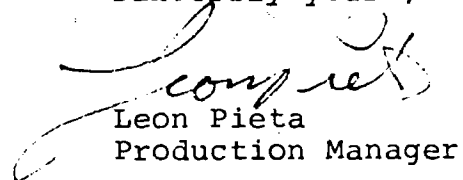
floor elevation. Thus the ground water level should be at approximately 371 feet elevation.

Item 4 - Analyses of Sludge and Liquid

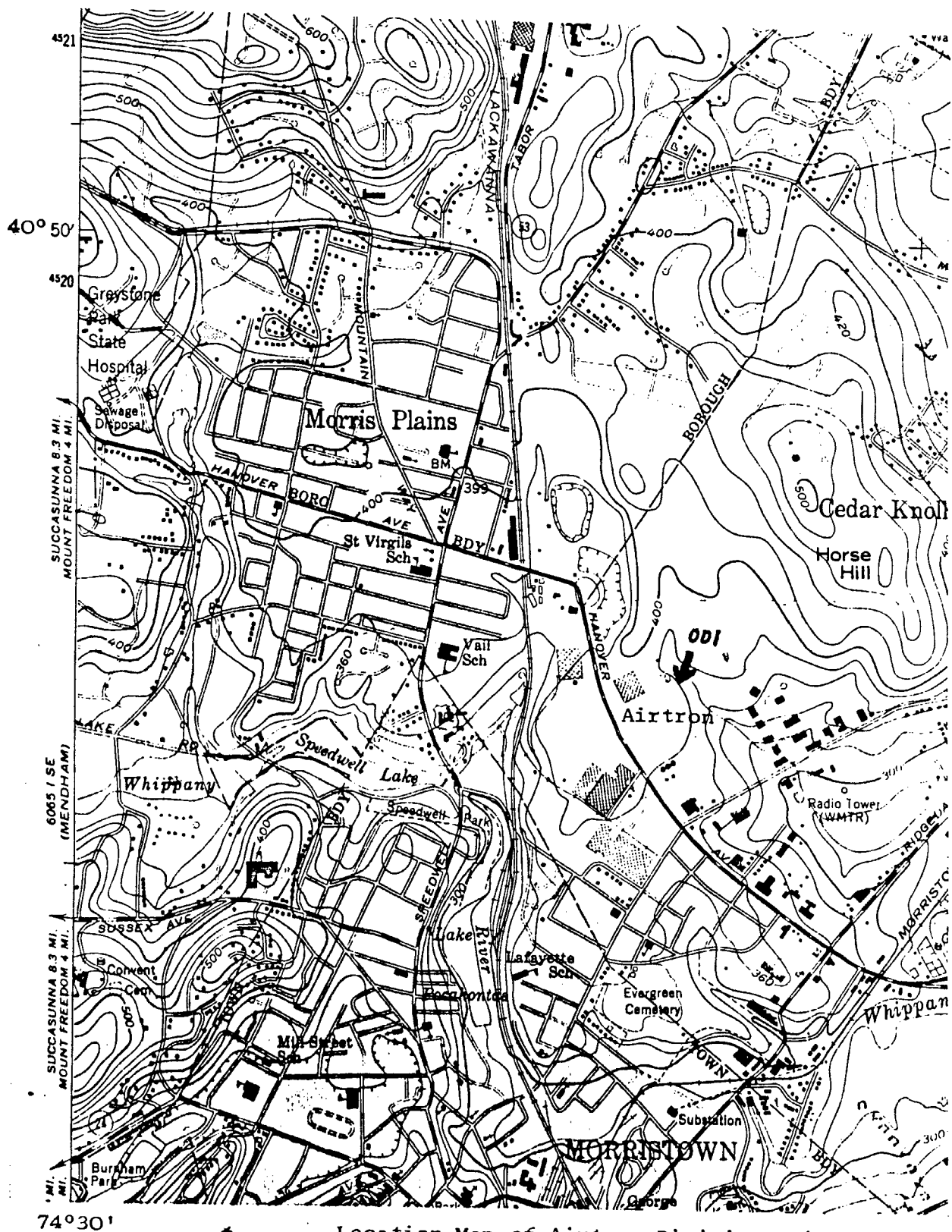
Copies of liquid sample analyses and sludge analyses on a dry weight basis are given. These results are presented in the units you specified. The samples are taken from and numbered according to the respective sludge bed on Figure 2.

We trust the above information is satisfactory for your present evaluation. If any further questions arise please contact the undersigned.

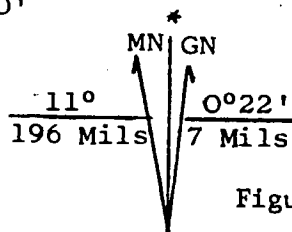
Sincerely yours,


Leon Pieta
Production Manager

dh



74°30'



Location Map of Airtron Division, Litton Systems
 Morris Plains, Morris County, New Jersey
 June 15, 1974, Page 1 of 1
 From U.S. Geological Survey, N4045-W7422.5/7.5

Figure 1 Topographical Site Map

C-3

TABLE I
DIMENSIONS OF SLUDGE BEDS AND SLUDGE DEPTHS

	<u>BED # 1</u>	<u>BED # 2</u>	<u>BED # 3</u>	<u>BED # 4</u>
Length	63 Ft.	63 Ft.	63 Ft.	60 Ft.
Depth	66 In.	66 In.	60 In.	10 Ft.
Width	37 Ft.	37 Ft.	37 Ft.	37 Ft.
Water level from surface to top of sludge	8 In.	6 In.	(0) No sludge	(0) No sludge
Top of sludge to bottom of bed	58 In.	60 In.	(0) No sludge	(0) No sludge

Note 1, Data taken 5-16-79 on water level and sludge depths.

Note 2. Construction details - Each bed was constructed by excavation of existing earth at ground level to the depth of bed. For beds No. 1 and No. 2 a surrounding earth mound was fashioned from earth to a height of 4 feet above ground level. For beds No. 3 and No. 4 excavation was made from ground level to indicated dimensions. No surrounding earth mound was utilized.

TEST PIT LOG

JOSEPH S. WARD, INC.
CONSULTING ENGINEERS
CALDWELL, NEW JERSEY

STARTED DATE 9/6/72 TIME _____ JOB NO. C7209-5
FINISHED DATE 9/6/72 TIME _____ TEST PIT NO. 13
CLIENT LITTON INDUSTRIES SITE Morris Plains, N. J.
SURFACE ELEVATION 368± EXCAVATOR Vito Nobile & Sons, Inc.
DATUM _____ EQUIPMENT Backhoe
WATER ELEVATION 2.5' INSPECTOR J. D. Chastanet

DEPTH	DENS.	MOIST	DESCRIPTION OF SOIL	REMARKS
0				
			Red brown coarse to fine SAND, little Silt, little coarse to fine Gravel with Cobbles & Boulders	
			4.0'	
5			Gray brown coarse to fine SAND, trace Silt, little coarse to fine Gravel	
			BOTTOM OF TEST PIT @ 6.0'	
			Heavy seepage below 4.0'	
10				
15				
20				

6-5

TEST PIT LOG

JOSEPH S. WARD, INC.
CONSULTING ENGINEERS
CALDWELL, NEW JERSEY

STARTED DATE 9/6/72 TIME _____ JOB NO. C7209-5
FINISHED DATE 9/6/72 TIME _____ TEST PIT NO. 15
CLIENT LITTON INDUSTRIES SITE Morris Plains, N. J.
SURFACE ELEVATION 368± EXCAVATOR Vito Nobile & Sons, Inc.
DATUM _____ EQUIPMENT Backhoe
WATER ELEVATION 1.0' INSPECTOR J. D. Chastanet

DEPTH	DENS.	MOIST	DESCRIPTION OF SOIL	REMARKS
0			Topsoil 0.2'	
			Red brown coarse to fine SAND, little coarse to fine Gravel 1.3'	
5			Gray brown coarse to fine SAND, trace Silt, little coarse to fine Gravel	
10				
15				
20				

BOTTOM OF TEST PIT @ 5.0'

Heavy seepage below 1.3'



ERC/LANCY

Division Dart Environment and Services Company
525 WEST NEW CASTLE STREET
ZELIENOPLE, PENNSYLVANIA 16063
(412) 452-9360 TELEX 86-6259



May 22, 1979

Samples Dated May 8, 1979

Samples Rec. May 11, 1979

Samples Anal. May 14, 1979

Airtron, Inc.
200 East Hanover Avenue
Morris Plains, New Jersey 07950
Attention: Mr. Leon Pieta

Liquid Samples from Sludge Beds (mg/liter)

	<u>Sample 1</u>	<u>Sample 2</u>	<u>Sample 3</u>	<u>Sample 4</u>
pH	9.10	7.15	8.20	8.00
CN	0.36	0.18	0.09	<0.01
Cr ⁶⁺	2.24	48.9	1.18	0.14
Cr ^t	3.50	56.0	1.46	0.39
Cu	1.78	4.3	1.26	0.47
Zn	1.68	8.05	0.04	2.35
Ag	0.07	0.13	0.02	<0.01
Ni	0.26	0.31	0.24	0.04
Cd	0.02	0.05	0.03	0.01
TDS	5588.	17914.	5276.	2450.

Sludge Samples (mg/Kg in Dry Solids)

	<u>Sample 1</u>	<u>Sample 2</u>	<u>Sample 3</u>	<u>Sample 4</u>
CN	<1.0	<1.0	<1.0	<1.0
Cr	3667.	42300.	392.	275.
Cu	2347	31500.	277.	448.
Zn	1214	6322.	1177.	878
Ag	212	938.	<10	<10
Ni	318	8558.	<10	<10
Cd	91	1380	<10	20
Dry Solids	60%	1.5%	83%	32%

F-105 INDUSTRIAL INSPECTION

Litton Systems - Airtron Division
200 E. Hanover Avenue
Morris Plains, NJ

February 13, 1979

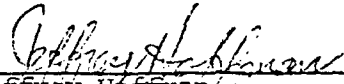
Participating Personnel:

NJ Department of Environmental Protection
Jeffrey Hoffman, Sr. Environ. Engineer
Richard Cahayla-Wynne, Environ. Specialist

Litton Systems

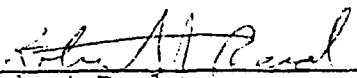
Louis Ghigliotty, Plater, S-IN
Leon Pieta,
Bill Dorman, Environ. Lab Supervisor
Richard Bruggeman, Maintenance Foreman

Report Prepared By:



Jeffrey Hoffman

Report Submitted To:



Robert Reed

SUMMARY

Objectives

To determine the Permittee's status of compliance with the requirements of NPDES #0025739, effective December 31, 1976 and to serve as an in depth follow up to a routine monitoring inspection conducted on December 13, 1978.

Findings and Conclusions

Based upon the on-site industrial inspection of the plant and its records, Airtron Division, Litton Industries, is not in compliance with all of the requirements of NPDES #NJ 0025739.

The following deficiencies were noted:

- 1. The permittee has never sent the State of New Jersey any copies of their NPDES Discharge Monitoring Reports.
- 2. Insufficient information is being supplied when recording their testing results.
- 3. No records are kept regarding maintenance and repairs of any of the treatment system.
- 4. Lack of flow measuring devices.
- 5. Composite sampling is not conforming with the required time interval.
- 6. Monitoring, which is being done more frequently than required, is not being recorded in the DMR's.

In addition to the above listed NPDES deficiencies there are violations of the state of New Jersey's "Water Pollution Control Act" N.J.S.A. 58:10A-1 et seq. These violations concern the improper use of the sludge beds.

- 1. Sludge is not being dried or removed from the beds.
- 2. The contents of all of the tanks in the plating room are being discharged into the ground via the unlined sludge beds.

Sampling

The sampling was conducted on February 13, 1979. A four-hour composite and two grab samples were taken from discharge #001 as it exits from the settling pond.

Recommendations

Appropriate enforcement action should be taken on both a Federal and State level to ensure compliance with permittee's NPDES permit and N.J.S.A. 58:10A-1 et seq.

GENERAL

Airtron is involved in two separate and distinct operations at the Morris Plains location. One is the manufacture of synthetic gem crystals. The other is the manufacture and electroplating of microwave components used in the aviation and shipping industries.

The plating operation operates on an eight hour day five days per week plus overtime. The resulting discharge occurs from 7:30 a.m. to 6:00 p.m. Currently they plate 1000 pieces per day with a maximum potential plating rate of 5000 pieces per day. These rates do not have much significance since the pieces, being used as the unit of measurement, have a wide variation in size. The raw materials used in the plating operation include aluminum, brass, copper, silver, nickel, cadmium, gold, tin, chromic acid, sulfuric acid, nitric acid, and muriatic acid. Methanol, trichloroethylene and toluol are also used as solvents.

Airtron's NPDES permit application states that water intake at the facility consists of 42,000 gallons per day of untreated water from the municipal system. Of this 50,000 gallons per day is rinse water from the plating tanks (see diagram of plating room) and is discharged out the permitted discharge point #001. The sludge beds receive about 2000 gallons per day. The remaining 90,000 gallons per day goes to the municipal sanitary system. This 90,000 gallons is composed of 10,000 gallons of sanitary waste, 18,000 gallons of process water, 2,000 gallons of boiler blowdown, and 60,000 gallons of cooling water.

IA. Effluent Limitations and Monitoring Requirements

Mr. Bill Dorman, Environmental Lab Supervisor, is the person responsible for all NPDES sampling, monitoring and records maintenance. The permittee has never sent any Discharge Monitoring Report to this Department although reports are being submitted to E.P.A. Since the Department is not receiving copies of the DMR's the only monitoring violations known are incorrect frequency of pH analysis and a failure to report flow values for the daily maximum as per a March 8, 1978 EPA Deficient Monitoring Report letter.

IB. Monitoring and Reporting

Reporting--As stated above, Mr. Dorman does the sampling for the NPDES requirement. Mr. Ghigliotty, S-IN, is the person responsible for the operation of the treatment system and the sampling, monitoring and record keeping required for the NJDEP monthly monitoring report. Mr. Ghigliotty takes a daily sample at the pond and at the stream and takes a weekly sample from the sludge beds. Spot tests are run on the samples for pH, CN, Cr., and Cu. Lancy Laboratories of Zelienople, Pennsylvania does all of Airtrons NPDES testing. Mr. Dorman has a copy of all of Lancy's analysis sheets since March, 1977. Airtron did not have to start taking samples until January, 1977. However, the records do not indicate the dates that the samples were analysed, who performed the analysis, or the analytical techniques and methods used. Regarding, the flow values, none

of the calculations or measured values are recorded, only the resulting values are logged and kept. Mr. Bruggeman is the person responsible for maintenance and he stated that no records or logs are kept concerning maintenance or repair of any of the treatment units.

Flow Measurement--Airtron's permit limitations are in lbs/day units. For this reason an accurate measurement of flow is important. Airtron's permit only requires instantaneous flow measurement. Airtron has no primary or secondary flow measurement devices. To obtain flow Mr. Dorman has taken measurements which approximate the cross section dimensions for a section of the discharge stream after the pond overflow. He multiplies the cross section by the height to calculate the water volume in that section of stream. He then floats a weighted cork through midstream and computes its velocity through that section of stream using a stop watch. From the volume and velocity he computes cubic feet per second. To allow for slower velocity of water nearer the banks he records the flow on the DMR as being 2/3 of the cubic feet per second value determined above.

Sampling--Once a month Mr. Dorman collects composite samples. He does so by taking one sample every hour for eight hours such that he has collected a total of five gallons by the end of that period. This is mixed and poured into three of Lancy's sample bottles, two of which contain stabilizers. Mr. Dorman takes these hourly grab samples for his composite sample, yet section I.B.3.g of Airtron's permit states that for intermittent discharges of 4-8 hours duration, grab samples shall be taken at a minimum of 30 minute intervals. Preservation techniques and sample holding times do conform with regulations.

Laboratory Procedures--Since the records do not indicate the laboratory procedures used it is not known whether procedures used are acceptable. The testing done by Mr. Ghigliotti for the state monthly report are not reported in the federal DMR. Airtron has never used spiked samples or had duplicate samples analyzed.

Permit Verification--The name and mailing address of permittee and the treatment processes are as described in the permit. The units of production rate measurement as stated in this report and the application do not lend themselves to comparison. The treatment processes are not well described in the permit application but they are as described in the application. The only modification made since the permit application is that some of the plating rinse tanks now only discharge when the pH goes above a predetermined level instead of having a constant overflow.

Other than the cooling, process, sanitary and boiler feed water which discharges to the municipal sanitary system Airtron has an industrial waste treatment facility, a surface water discharge, a ground discharge and use of a scavenger service.

The industrial waste treatment facility was constructed in 1963. The facility is designed such that the toxic waste is treated in a closed system with no discharge to the stream. There is a closed loop cyanide treatment system, a closed loop chromium treatment system, a closed loop copper/chromium treatment system, a batch treatment system for acid/alkali floor spillage and a batch treatment system for cyanide floor spillage. A floor plan of the plating room and treatment tanks is attached.

The closed loop cyanide treatment system uses sodium hydroxide to maintain a pH of 10.5-12.0 and chlorine to reduce the cyanide. The closed loop chromium treatment system is designed to completely reduce hexavalent chromium to trivalent chromium by the addition of sodium hydrosulfite and to completely remove the trivalent chromium from solution by precipitation with sodium hydroxide. The closed loop copper/chromium treatment system is identical to the closed loop chromium treatment system. All three closed loop systems were designed to have their sludge going to sludge beds. The liquid contents of these systems will be discussed later in this report.

Spilled acid, alkali and chromates are neutralized on a batch basis. The pH adjustment is made using sodium bisulfate for acid waste or sodium hydrosulfite if the waste is alkali or neutral. This neutralizes the pH and reduces the chromates. Spilled cyanide wastes are treated on a batch basis by oxidation with calcium hypochlorite. This is followed by neutralization to pH 6.5-9.0. The entire contents of both batch treatment systems are pumped to the sludge beds.

Airtron's discharge to surface waters consists of the untreated discharge of all the rinse tanks in the plating room. After the rinse water leaves the building it goes to a settling tank. The overflow from the settling tank is the 001 discharge in Airtron's NPDES permit.

The ground discharge consists of the sludge beds. As designed there are two sludge beds each having dimensions of 30x60x5 feet and a volume of 67,080 gallons. They are unlined and are supposed to receive sludge from the closed loop treatment systems and the disposal of the contents of the batch spillage treatment systems. The liquid is supposed to dissipate by evaporation and percolation and the dried sludge disposed of in an acceptable area. However, what is actually happening is that the sludge beds never dry out and no sludge has been removed in at least the last thirteen years. Both are full of sludge. Two additional sludge beds have been constructed so that the original two could dry out but this has not yet worked. In addition, every single tank within the plating room is pumped, when exhausted and needing replacement, to the appropriate batch treatment system, treated and discharged to the sludge beds.

The only wastes being removed by scavenger are the waste solvents. These are put into labled drums, stored in the chemical area in back of the building and picked up once a year by scavenger.

A7:G25

REPORT ON SAMPLING

Sample #C02284

Final Effluent

Grab #1: 10:15 a.m.

Parameters: Suspended Solids/Ash, pH, Cyanide, Chromium Total,
Chromium Hex., Copper, Zinc, Nickel, Silver,
Cadmium, Aluminum, Temperature

Sample #C02283

Final Effluent

Grab #2: 12:35

Parameters: Same as #C02284

Sample #C02276

Final Effluent

4 Hour Composite: 9:30-1:30; 1/2 hour intervals

Parameters: Color, Odor, Turbidity, pH, Suspended Solids, Ash
Cyanide, Chromium Total, Chromium Hex, Copper, Zinc
Nickel, Silver, Cadmium, Aluminum, Temperature

ANALYSIS OF RESULTS

As stated previously it was not possible to determine the flow rate during the sampling period. Therefore, it is not possible to state conclusively whether the discharge was within the NPDES permit limitations. However, since the flow appeared to be much less than 35 gpm (50,000 gpd) the observed values seem to be within the permit limitations.

A7:G25

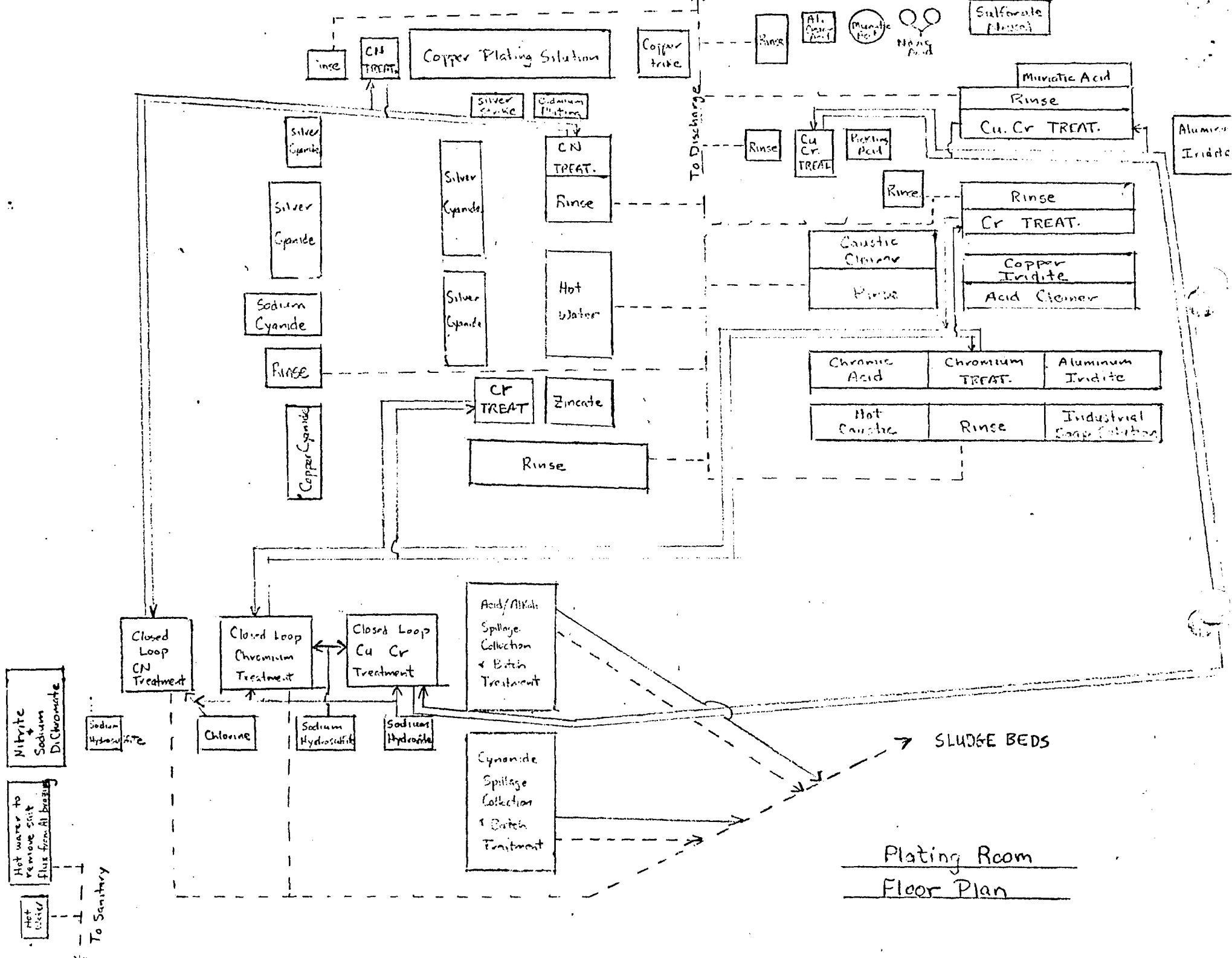
Morris Plains

February 13, 1979

R. Cahayla-Wynne

[illegible]

10-1



Plating Room
Floor Plan

Chem-25
Sept. 75

NEW JERSEY STATE DEPARTMENT OF
HEALTH & WELFARE
WATER OR WASTEWATER ANALYSIS

17
Time & Date Received _____
By Labs _____
Lab. No. _____

MAR 5 9 08 AM '79
NJ DEPT. OF HEALTH & WELFARE
DIV. OF WATER RESOURCES
MS&E

FIELD INFORMATION

PLEASE TYPE OR PRINT
WITH BALLPOINT PEN

Sample No.

C 02284

Municipality

Morris Twp

Plant

Airson

Stream

Trib → Whippany

Location

200 E Hanover Ave

Description and Remarks:

Gravel #1

Date of Collection

13 Feb

1979

Hour

10 15

A.M.

P.M.

Composite Period

8 hr

Interval

Collected by

C. Bayle Wynne

Residual Chlorine:

Immediate

Developed

Flow Rate

Temperature

6°C

ITEMS CIRCLED BELOW ARE UNSATISFACTORY

Dilutions Requested
(Bacteriological)

10	1	10.1	10.2	10.3	10.4	10.5	10.6
----	---	------	------	------	------	------	------

LABORATORY RESULTS

BACTERIOLOGICAL

Coliform MPN/100 ml.

(Confirmed Test); Fecal Coliform MPN/100 ml.

Fecal Streptococci: MPN/100 ml.

Other

CHEMICAL AND PHYSICAL ANALYSES (mgs./liter, unless otherwise noted)

Color (units)	Chloride	Sulfate	Other Determinations
Odor (cold)	Suspended Solids 22	Grease & Oil	Ni 0.047
Turbidity (units)	Ash 8	Cyanide 0.018	Ag ND
pH 8.2	Total Solids	Chromium Total 0.096	CD 0.018
Acidity to pH 4	Ash	Chromium Hex 0.008	AL 0.248
Alkalinity to pH 4	Total PO ₄	Ortho - PO ₄	
Nitrite N	MBAS	Copper 0.154	
Nitrate N	Phenols	Lead	ND = NON-DETECTABLE; I. E. BELOW DETECTABLE LIMITS RE METHOD # 4
Ammonia N	COD	Arsenic	
Total Kjell. N	Iron	Zinc ND	

REPORT SUBMITTED
DIV. OF LABORATORIES & EPID.

BIOCHEMICAL OXYGEN DEMAND (mgs./liter)

Field D.O.		Lab. D.O.			Seed Required:								Yes	No
Sample Conc. %	PLEASE CIRCLE	0.1	0.2	0.5	1.0	2.0	5.0	10	25	50	75	100		
BOD ₅														

MAR 3 1979

NEW JERSEY STATE DEPARTMENT OF
HEALTH OR WASTEWATER ANALYSISTime & Date Received
By Labs
Lab. No.NEW JERSEY STATE DEPARTMENT OF
HEALTH DIVISION OF WATER RESOURCES
MS & E FIELD INFORMATIONPLEASE TYPE OR PRINT
WITH BALLPOINT PENSample No. C02283Municipality Morris TwpPlant AirtronStream Trick → WhippanyLocation 200 E Harbor AveDescription and Remarks: Grab #2 - Final EffluentDate of Collection 13 Feb 19 79Hour 1235 A.M. P.M.Composite Period Grab IntervalCollected by Cahayla-Wynne

Residual Chlorine: Immediate

Developed

Flow Rate

Temperature 6° C

ITEMS CIRCLED BELOW ARE UNSATISFACTORY

Dilutions Requested
(Bacteriological)

10	1	10.1	10.2	10.3	10.4	10.5	10.6
----	---	------	------	------	------	------	------

LABORATORY RESULTS
BACTERIOLOGICAL

Coliform MPN/100 ml. (Confirmed Test); Fecal Coliform MPN/100 ml.

Fecal Streptococci: MPN/100 ml. Other

CHEMICAL AND PHYSICAL ANALYSES (mgs./liter, unless otherwise noted)

Color (units)	Chloride	Sulfate	Other Determinations
Odor (cold)	Suspended Solids <u>19</u>	Grease & Oil	<u>Ni</u> 0.024
Turbidity (units)	Ash <u>3</u>	Cyanide 0.020	<u>Ag</u> ND
pH <u>8.1</u>	Total Solids	Chromium Total <u>0.104</u>	<u>CrO</u> 0.010
Acidity to pH 4	Ash	Chromium Hex <u>0.012</u>	<u>Al</u> 0.228
Alkalinity to pH 4	Total PO ₄	Ortho - PO ₄	
Nitrite N	MBAS	Copper <u>0.142</u>	
Nitrate N	Phenols	Lead	ND = NON-DETECTABLE; I. E. BELOW DETECTABLE LIMITS AS IN # 4
Ammonia N	COD	Arsenic	
Total Kj. N	Iron	Zinc <u>ND</u>	FEB 28 1979

BIOCHEMICAL OXYGEN DEMAND (mgs./liter)

REPORT SUBMITTED
DIV. OF LABORATORIES & EPID.

Field D.O.	Lab. D.O.	Seed Required:										
Sample Conc. %	PLEASE CIRCLE	0.1	0.2	0.5	1.0	2.0	5.0	10	25	50	75	100
BOD ₅												

M. J. L. L. L.
Chem-25
Sept. 75

NEW JERSEY STATE DEPARTMENT OF HEALTH
STREAM OR WASTEWATER ANALYSIS

Time & Date Received _____
By Labs _____

Lab. No. _____

MAR 5 9 08 AM '79
FIELD INFORMATION

PLEASE TYPE OR PRINT
WITH BALLPOINT PEN

NJ DEPT. ENV. PROTECTION
DIV. WATER RESOURCES
MS&E

Sample No. C 02276

Date of Collection 13 Feb 1979

Hour 0930-1330 A.M. _____ P.M. _____

Composite Period 4 hr. Interval 1/2 hr.

Collected by Cahayla-Wynne

Residual Chlorine: _____

Immediate _____

Municipality Morris Twp

Plant Airtron

Stream Trif. to Whiggany

Location 200 E. Hanover Ave

Flow Rate _____

Temperature 6°C

Description and Remarks: 4 hr. composite - Final Effluent

ITEMS CIRCLED BELOW ARE UNSATISFACTORY

Dilutions Requested
(Bacteriological)

10	1	10 ⁻¹	10 ⁻²	10 ⁻³	10 ⁻⁴	10 ⁻⁵	10 ⁻⁶

LABORATORY RESULTS
BACTERIOLOGICAL

Coliform MPN/100 ml. _____ (Confirmed Test); Fecal Coliform MPN/100 ml. _____

Fecal Streptococci: MPN/100 ml. _____ Other _____

CHEMICAL AND PHYSICAL ANALYSES (mgs./liter, unless otherwise noted)

/	Color (units) <u>30</u>	/	Chloride	/	Sulfate	/	Other Determinations
/	Odor (cold) <u>ND</u>	/	Suspended Solids <u>15</u>	/	Grease & Oil	/	<u>Ni</u> 0.039
/	Turbidity (units) <u>5</u>	/	Ash <u>2</u>	/	Cyanide <u>0.018</u>	/	<u>Ag</u> 0.021
/	pH <u>8.2</u>	/	Total Solids	/	Chromium Total <u>0.104</u>	/	<u>CO</u> 0.011
	Acidity to pH 4	/	Ash	/	Chromium Hex <u>0.026</u>	/	<u>Al</u> 0.228
	Alkalinity to pH 4		Total PO ₄		Ortho - PO ₄		
	Nitrite N		MBAS	/	Copper <u>0.134</u>		
	Nitrate N		Phenols		Lead		
	Ammonia N		COD		Arsenic	ND	ND = NON-DETECTABLE; I. E. BELOW DETECTABLE LIMITS RE: MMS # 4
	Total Kj. N		Iron	/	Zinc <u>ND</u>		

FEB 28 1979

BIOCHEMICAL OXYGEN DEMAND (mgs./liter)

REPORT SUBMITTED
DIV. OF LABORATORIES & EPID.

Field D.O.		Lab. D.O.			Seed Required:			Yes	No			
Sample Conc. %	PLEASE CIRCLE	0.1	0.2	0.5	1.0	2.0	5.0	10	25	50	75	100
BOD ₅												

JNISP

RCRA GENERATOR INSPECTION FORM

COMPANY NAME: *Electron Division Litho system*

EPA I.D. NUMBER:

NS 0030239412

COMPANY ADDRESS: *200 E Hanover St.*

COMPANY CONTACT OR OFFICIAL:

John Nicola

INSPECTOR'S NAME: *Rob Dante*

TITLE: *Plant Engineer*

SPS IT

BRANCH/ORGANIZATION: *NS DEP*

CHECK IF FACILITY IS ALSO A TSD

FACILITY

☒

DATE OF INSPECTION: *1/11/82*

YES

NO

DO NOT
REVIEW

(1) Is there reason to believe that the facility has hazardous waste on site?

☒

a. If yes, what leads you to believe it is hazardous waste?
Check appropriate box:

☒ Company admits that its waste is hazardous during the inspection.

☒ Company admitted the waste is hazardous in its RCRA notification and/or Part A Permit Application.

☒ The waste material is listed in the regulations as a hazardous waste from a nonspecific source (§261.31)

☐ The waste material is listed in the regulations as a hazardous waste from a specific source (§261.32)

☒ The material or product is listed in the regulations as a discarded commercial chemical product (§261.33)

☒ EPA testing has shown characteristics of ignitability, corrosivity, reactivity or extraction procedure toxicity, or has revealed hazardous constituents (please attach analysis report)

☐ Company is unsure but there is reason to believe that waste materials are hazardous. (Explain)

YES NO DON'T
KNOW

- b. Is there reason to believe that there are hazardous wastes on-site which the company claims are merely products or raw materials?

— ✓ —

Please explain:

- c. Identify the hazardous wastes that are on-site, and estimate approximate quantities of each.
*approx 34, 55 gallon drums of waste solvents
 8, waste oil drums 55 gallon
 waste plating sludge - 20, 55 gallon drums*

- d. Describe the activities that result in the generation of hazardous waste. *oil used in the cutting of metal. solvents used for washing parts they make micro wave components and grow crystals and decreasing and pain thinning waste plating sludge from waste water treatment plant contains metals,*

- (2) Is hazardous waste stored on site?

✓ — —

- a. What is the longest period that it has been accumulated?

- b. Is the date when drums were placed in storage marked on each drum?

✓ — ✓ —

- (3) Has hazardous waste been shipped from this facility since November 19, 1980?

✓ — —

- a. If "yes," approximately how many shipments were made?

2

- (4) Approximately how many hazardous waste shipments off site have been made since November 19, 1980?

2

- a. Does it appear from the available information that there is a manifest copy available for each hazardous waste shipment that has been made?

✓ — —

- b. If "no" or "don't know," please elaborate.

YES	NO	DON'T KNOW
-----	----	---------------

c. Does each manifest (or a representative sample) have the following information?

- a manifest document number ☒ YES ☐ NO ☐ DON'T KNOW
- the generator's name, mailing address, telephone number, and EPA identification number ☒ YES ☐ NO ☐ DON'T KNOW
- the name, and EPA identification number of each transporter ☒ YES ☐ NO ☐ DON'T KNOW
- the name, address and EPA identification number of the designated facility and an alternate facility, if any: The facility was Baxone which is under state investigation ☒ YES ☐ NO ☐ DON'T KNOW
- a description of the wastes (DOT) ☒ YES ☐ NO ☐ DON'T KNOW
- the total quantity of each hazardous waste by units of weight or volume, and the type and number of containers as loaded into or onto the transport vehicle ☒ YES ☐ NO ☐ DON'T KNOW
- a certification that the materials are properly classified, described, packaged, marked, and labeled, and are in proper condition for transportation under regulations of the Department of Transportation and the EPA ☒ YES ☐ NO ☐ DON'T KNOW

(5) Were there any hazardous wastes stored on site at the time of the inspection?

- a. If "yes," do they appear properly packaged (if in containers) or, if in tanks, are the tanks secure? ☐ YES ☒ NO ☐ DON'T KNOW
1 drum, expanded waste, 1 drum of waste flaking sludge very badly rusted.
- b. If not properly packaged or in secure tanks, please explain.

c. Are containers clearly marked and labelled? ☒ YES ☐ NO ☐ DON'T KNOW

d. Do any containers appear to be leaking? ☐ YES ☒ NO ☐ DON'T KNOW

e. If "yes," approximately how many?

(6) Has the generator submitted an annual report to EPA covering the previous calendar year? *NA* — —

a. How do you know? — —

(7) Has the generator received signed copies (from the TSD facility) of all manifests for wastes shipped off site more than 35 days ago? — — *✓*

a. If "no," have Exception Reports been submitted to EPA covering these shipments? *Company official did not know if he received the signed receipt* — — —

(8) General comments.

RCRA INSPECTION REVIEW SHEET

Name of Facility - Airtron Division L. Hen System
RCRA ID# - NJD030239412
Date of Inspection - 11/11/82
Type of Inspection: Generator Transporter TSD
Name of EPA/State Inspector - Bob Dante / NJDEP

Findings of Inspection: The waste storage area, drums were badly rusted and not segregated one drum was expanded because of the cold. The facility had the following paper and

EHV. Violations 265.171 265.110 all 265.142 265.16 all 265.15 all
265.13 all 265.15 all and 265.35
analysis incp air sp

Action(s) Taken: NONE

Action(s) Recommended: N.O.V. For above violations

RCRA TREATMENT, STORAGE AND DISPOSAL FACILITY INSPECTION FORM
(FOR THE REGULATIONS ONLY)

COMPANY NAME: Aviation Division Lithum system EPA I.D. NUMBER: AJDC00039412

COMPANY ADDRESS: 200 E. Hanover St.

COMPANY CONTACT OR OFFICIAL:

John ~~Smith~~ Nicola

OTHER ENVIRONMENTAL PERMITS HELD

BY FACILITY: ☒ RCRA

TITLE: Plant Engineer

☐ AIR

☐ OTHER

INSPECTOR'S NAME: Bob Darte

DATE OF INSPECTION: 7/11/82

BRANCH/ORGANIZATION: NJDEP

TIME OF DAY INSPECTION TOOK PLACE: 12:30 pm

(1) Is there reason to believe that the facility has hazardous waste on site?

a. If yes, what leads you to believe it is hazardous waste? Check appropriate box:

☒ Company admits that its waste is hazardous during the inspection.

☒ Company admitted the waste is hazardous in its RCRA notification and/or Part A Permit Application.

☒ The waste material is listed in the regulations as a hazardous waste from a nonspecific source (§261.31)

☐ The waste material is listed in the regulations as a hazardous waste from a specific source (§261.32)

☒ The material or product is listed in the regulations as a discarded commercial chemical product (§261.33)

☒ EPA testing has shown characteristics of ignitability, corrosivity, reactivity or extraction procedure toxicity, or has revealed hazardous constituents (please attach analysis report)

☐ Company is unsure but there is reason to believe that waste materials are hazardous. (Explain)

b. Is there reason to believe that there are hazardous wastes on-site which the company claims are merely products or raw materials?

YES NO I DON'T KNOW

— ☒ —

Please explain:

c. Identify the hazardous wastes that are on-site, and estimate approximate quantities of each.

waste solvents — 34,55 gallon drums

waste oil — 8 55 gallon drums

waste plating sludge — 20,55 gallon drums

(2) Does the facility generate hazardous waste? ☒

(3) Does the facility transport hazardous waste? ☒

(4) Does the facility treat, store or dispose of hazardous waste? ☒

VISUAL OBSERVATIONS

- | | YES | NO | DOUBT |
|---|---------------------|----|-------|
| (5) <u>Site Security</u> (§265.14) | | | |
| a. Is there a 24-hour surveillance system? | ✓ | — | — |
| b. Is there a suitable barrier which completely surrounds the active portion of the facility? | Yes/Fence | — | — |
| c. Are there "Danger-Unauthorized Personnel Keep Out" signs posted at each entrance to the facility? | ✓ | — | — |
| (6) Are there ignitable, reactive or incompatible wastes on site? (§265.27) | ✓ | — | — |
| a. If "YES", what are the approximate quantities? | | | |
| | 34, 55 gallon drums | | |
| b. If "YES", have precautions been taken to prevent accidental ignition or reaction of ignitable or reactive waste? | ✓ | — | — |
| c. If "YES", explain <i>stored in sealed containers one drum expanded</i> | | | |
| d. In your opinion, are proper precautions taken so that these wastes do not: | | | |
| - generate extreme heat or pressure, fire or explosion, or violent reaction? | ✓ | — | — |
| - produce uncontrolled toxic mists, fumes, dusts, or gases in sufficient quantities to threaten human health? | ✓ | — | — |
| - produce uncontrolled flammable fumes or gases in sufficient quantities to pose a risk of fire or explosions? | ✓ | — | — |
| - damage the structural integrity of the device or facility containing the waste? | ✓ | — | — |
| - threaten human health or the environment? | ✓ | — | — |

Please explain your answers, and comment if necessary.

- e. Are there any additional precautions which you would recommend to improve hazardous waste handling procedures at the facility? *Yes/ store drums on wooden pallets not only on concrete pad*
- (7) Does the facility comply with preparedness and prevention requirements including maintaining: (§265.32)

- | | YES | NO | EXPLAIN |
|---|-----|----|---------|
| - an internal communications or alarm system? | ✓ | — | — |
| - a telephone or other device to notify emergency authorities from local authorities? | ✓ | — | — |
| - portable fire equipment? | ✓ | — | — |
| - adequate waste signs? | — | ✓ | — |
| - in your opinion, do the types of wastes on site require all of the above procedures, or are some not needed? Explain. Drums should be better segregated | ✓ | — | — |

In your opinion, do the types of wastes on site require all of the above procedures, or are some not needed? Explain. See above

- *(8) Have you inspected to verify that the groundwater monitoring wells (if any) mentioned in the facility's groundwater monitoring plan (see no. 19 below) are properly installed? — — — ✓

If you have, please comment, as appropriate.

- (9) a. Is there any reason to believe that groundwater contamination already exists from this facility? If "YES", explain. — — — ✓
- b. Do you believe that operation of this facility may affect groundwater quality? — — — ✓
- c. If "YES", explain. They have had sludge lagoons which have since been removed

RECORDS INSPECTION

- (10) Has the facility received hazardous waste from an off-site source since Nov. 19, 1980 (effective date of the regulations)? NA — — —
- a. If "YES", does it appear that the facility has a copy of a manifest for each hazardous waste load received? — — —
- b. How many post-November 19 manifests does it have? (If the number is large, you may estimate) 2 shipments of waste generated
- c. Does each manifest (or a representative sample) have the following information?
- a manifest document number — — — ✓

YES NO DON'T
KNOW

- the generator's name, mailing address, telephone number, and EPA identification number ☒ ☐ ☐
- the name, and EPA identification number of each transporter ☒ ☐ ☐
- the name, address and EPA identification number of the designated facility and an alternate facility, if any; ☒ ☐ ☐
- a DOT description of the wastes ☒ ☐ ☐
- the total quantity of each hazardous waste by units of weight or volume, and the type and number of containers as loaded into or onto the transport vehicle ☒ ☐ ☐
- a certification that the materials are properly classified, described, packaged, marked, and labeled, and are in proper condition for transportation under regulations of the Department of Transportation and the EPA ☒ ☐ ☐

d. Are there any indications that unmanifested hazardous wastes have been received since November 19, 1980? If YES, explain. ☐ ☒ ☐

(11) Does the facility have a written waste analysis plan specifying test methods, sampling methods and sampling frequency? (§265.13) ☐ ☒ ☐

- a. Does the character of wastes handled at the facility change from day to day, week to week, etc., thus requiring frequent testing?
(You may check more than one)
Waste characteristics vary ☐
All wastes are basically the same ☒
Company treats all waste as hazardous ☐
Don't know ☐
- b. Does hazardous waste come to this facility from off-site sources? ☐ ☒ ☐
- c. If waste comes from an off-site source, are there procedures in the plan to insure that wastes received conform to the accompanying manifest? ☒ ☐ ☐

(12) INSPECTIONS (§265.15)

- a. Does the facility have a written inspection schedule? ☐ ☒ ☐
- b. Does the schedule identify the types of problems to be looked for and the frequency for inspections? ☐ ☐ ☐
- c. Does the owner/operator record inspections in a log? ☐ ☐ ☐
- d. Is there evidence that problems reported in the inspection log have not been remedied? If "YES," please explain. ☐ ☐ ☐

(13) EMPLOYEE TRAINING (265.16)

a. Is there written documentation of the following:

- job title for each position at the facility related to hazardous waste management and the name of the employee filling each job? ☒ ☐ ☐
- type and amount of training to be given to personnel in jobs related to hazardous waste management? ☐ ☐ ☐
- actual training or experience received by personnel? ☐ ☐ ☐

(14) Does the facility have a written contingency plan for emergency procedures designed to deal with fires, explosion or any unplanned release of hazardous waste? ☒ ☐ ☐
(265.31)

a. Does the plan describe arrangements made with local authorities? ☐ ☐ ☐b. Has the contingency plan been submitted to local authorities? ☐ ☐ ☐How do you know? ☐ ☐ ☐c. Does the plan list names, addresses, and phone numbers of Emergency Coordinators? ☐ ☐ ☐d. Does the plan have a list of what emergency equipment is available? ☐ ☐ ☐e. Is there a provision for evacuating facility personnel? ☐ ☐ ☐f. Was an Emergency Coordinator present or on call at the time of the inspection? ☐ ☐ ☐

(15) Does the owner/operator keep a written operating record with: (265.73)

- a description of wastes received with methods and dates of treatment, storage or disposal? ☒ ☐ ☐- location and quantity of each waste? ☒ ☐ ☐- detailed records and results of waste analysis and traceability tests performed on wastes coming into the facility? ☒ ☐ ☐- detailed operating summary reports and description of all emergency incidents that requires the implementation of the facility contingency plan? ☒ ☐ ☐

(16) Does the facility have written closure and post-closure plans? (265.110) ☒ ☐ ☐

a. Does the written closure plan include:

- a description of how and when the facility will be partially (if applicable) and ultimately closed? ☐ ☐ ☐

- an estimate of the maximum inventory of material in storage or treatment at any time during the life of the facility? ___
- a description of the steps necessary to dismantle facility equipment during closure? ___
- a schedule for final closure including the anticipated date when wastes will no longer be received and when final closure will be completed? ___
- b. What is the anticipated date for final closure? ___
- 10. Does the owner/operator have a written post-closure plan identifying the activities which will be carried on after closure and the frequency of those activities? ___
- 4. Does the written post-closure plan include:
 - a description of planned groundwater monitoring activities and their frequencies during post-closure? ___
 - a description of planned maintenance activities and frequencies to ensure integrity of final cover during post-closure? ___
 - the name, address and phone number of a person or office to contact during post-closure? ___
- *(17) Does the owner/operator have a written estimate of the cost of closing the facility? (§265.142) What is it? ___ ✓ ___
- *(18) Does the owner/operator have a written estimate of the cost for post-closure monitoring and maintenance? What is it? (§265.144) n/a ___
- *(19) Has a groundwater monitoring plan been submitted to the Regional Administrator for facilities containing a surface impoundment, landfill or land treatment process? (This requirement does not apply to recycling facilities.) (§265.90) n/a ___
- a. Does the plan indicate that at least one monitoring well has been installed hydraulically upgradient from the limit of the waste management area? ___
- b. Does the plan indicate that there are at least three monitoring wells installed hydraulically downgradient at the limit of the waste management area? ___

† This section applies only to disposal facilities.

* Effective date for this requirement is May 19, 1981.

please circle all appropriate activities and answer questions on indicated pages for all activities circled. When you submit your report, include only those site-specific pages that you have used.

<u>STORAGE</u>	<u>TREATMENT</u>	<u>DISPOSAL</u>
Waste Pile p. 2	Tank p. 3	Landfill pp. 12-14
Surface Impoundment p. 3	Surface Impoundment pp. 8-9	Land Treatment pp. 9, 10
<u>Container p. 4</u>	Incineration pp. 12-13	Surface Impoundment p. 8
Tank, above ground p. 3	Thermal Treatment pp. 12-13	Other _____
Tank, below ground p. 3	Land Treatment pp. 9-10	
Other _____	Chemical, Physical p. 13 and Biological Treatment (other than in tanks, surface impoundment or land treatment facilities)	YES NO DON'T KNOW
	Other _____	

CONTAINERS (\$265.170)

- Are there any leaking containers?
If "YES", explain. ✓
- Are there any containers which appear in danger of leaking?
If "YES", explain. ✓
1 drum badly expanded and another drums waste plating sludge badly rusted
- Do wastes appear compatible with container materials? ✓
- Are all containers closed except those in use? ✓
- Do containers appear to be opened, handled or stored in a manner which may rupture the containers or cause them to leak? ✓
- How often does the plant manager claim to inspect container storage areas? *Weekly*
- Does it appear that incompatible wastes are being stored in close proximity to one another?
If "YES", explain. ✓
- Are containers holding ignitable or reactive wastes located at least 15 meters (50 feet) from the facility's property line? ✓
- What is the approximate number and size of containers with hazardous wastes?

62,55 gallon drums



State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
ENFORCEMENT ELEMENT - NORTHERN REGION
1259 Route 46 - Building 2
Parsippany-Troy Hills, NJ 07054

JOHN W. GASTON JR., P.E.
DIRECTOR

DIRK C. HOFMAN, P.E.
DEPUTY DIRECTOR

Mr. Leon Pieta
Airtron Division - Litton Industries, Inc.
200 East Hanover Avenue
Morris Plains, New Jersey 07950

DEC 31 1985

Re: Compliance Evaluation Inspection
Airtron Division
NJPDES No.: NJ0025739
Munic/County: Hanover Township, Morris County

Dear Mr. Pieta:

A Compliance Evaluation Inspection of your facility was conducted by a representative of this Division on December 10, 1985. A copy of the completed inspection report form is enclosed for your information.

Your facility received a rating of "UNACCEPTABLE" due to the following deficiencies:

1. Violation of your NJPDES permit limit for arsenic since May 1, 1985.
2. Violation of your NJPDES permit limit for fluoride since August 1985.
3. Methylene chloride concentration was found to be 0.690 milligrams per liter in a sample taken September 9, 1985 for analysis of volatile organics.

Future instances of noncompliance must be reported to this Department upon submission of Discharge Monitoring Reports, with the following information included:

1. Facility name, location and NJPDES permit number.
2. The item(s) of noncompliance.
3. An explanation of why the excursion had occurred.
4. A description of action taken to mitigate and eliminate future instances of noncompliance.

Since the deficiencies cited are presently, or could, in the future, adversely affect effluent quality, you are hereby DIRECTED to institute measures to correct the deficiencies. A written report concerning specific details of remedial measures to be instituted, as well as an implementation timetable must be submitted to this Department and USEPA, Permits Administration Branch within thirty (30) calendar days of the date of this correspondence.

Both the New Jersey Water Pollution Act (N.J.S.A. 58:10A-1 et seq.) and the Federal Water Pollution Control Act, as amended (33 U.S.C. 466 et seq.) provide for substantial monetary and criminal penalties in cases of permit violations.

Please direct all correspondence and inquiries to Lisa R. Tracy, the Compliance Investigator responsible for this case, who can be reached at (201) 299-7592 or by letter through this Division.

Failure to fully comply with the above will result in the initiation of enforcement action by this Department and/or the U.S. Environmental Protection Agency. This shall in no way be construed, however, to indicate any exemption on your part from possible penalties for violations indicated by the Compliance Evaluation Inspection, as stated above.

Very truly yours,

~~Original~~ signed & mailed

William Malloy, Supervisor
Compliance Monitoring Unit
Northern Bureau of Regional
Enforcement

A23:G5.5 (F)

cc: Joseph M. Mikulka, Chief, Northern Bureau of Regional
Enforcement
Paul Molinari, USEPA - Region II
Richard Baker, USEPA - Region II
Madison Health District - Hanover Township
George VanOden, Hanover Health Department

→ bcc: Lisa R. Tracy
Bureau File THRU J. Mikulka and W. Malloy
Central File/NJPDES, Hanover Township, Morris County
Enforcement Actions (Marianne Montgomery)



NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
CN 029, Trenton, N.J. 08625



DISCHARGE SURVEILLANCE REPORT

PERMIT # NT 0025739 NO. OF DISCHARGES CC-2 CLASS May-Ind-DSC

DISCHARGER Airborn Division

OWNER Airborn - Division of Litter Industries

MUNICIPALITY Hanover Twp COUNTY Merri WATERSHED CODE P

LOCATION 200 East Hanover Avenue

RECEIVING WATERS Trib → Whippany River STREAM CLASS FW-2 NT

LICENSED OPERATOR & PLANT CLASS Louis Ghiglietti (NN)

TRAINEE/ASSISTANT NA OTHER INFO. DCI-534-5520

EDR 5-1-85 Facility requires N2 operator

DEFICIENCIES OR COMMENTS

1. Permit limit for fluoride has been consistently violated since August 1985.
2. Permit limit for arsenic has been consistently violated since the effective date of this permit (May 1, 1980), and its inclusion as a required parameter for analysis in this permit.

3. The concentration of methylmercury found in a sample taken September 9, 1985 was 690 µg/L (0.69 mg/L). Total Vols. to be 2.100 µg/L

OVERALL RATING ☐ Acceptable ☐ Conditionally Acceptable ☒ Unacceptable

EVALUATOR Lisa Alice Thayer TITLE EC-1-III

INFORMATION FURNISHED BY (Name) Louis Ghiglietti + Leon Picta
(Title) Operator + Production mgr (Organization) Airborn

DATE OF INSPECTION December 10, 1985



DISCHARGE SURVEILLANCE REPORT



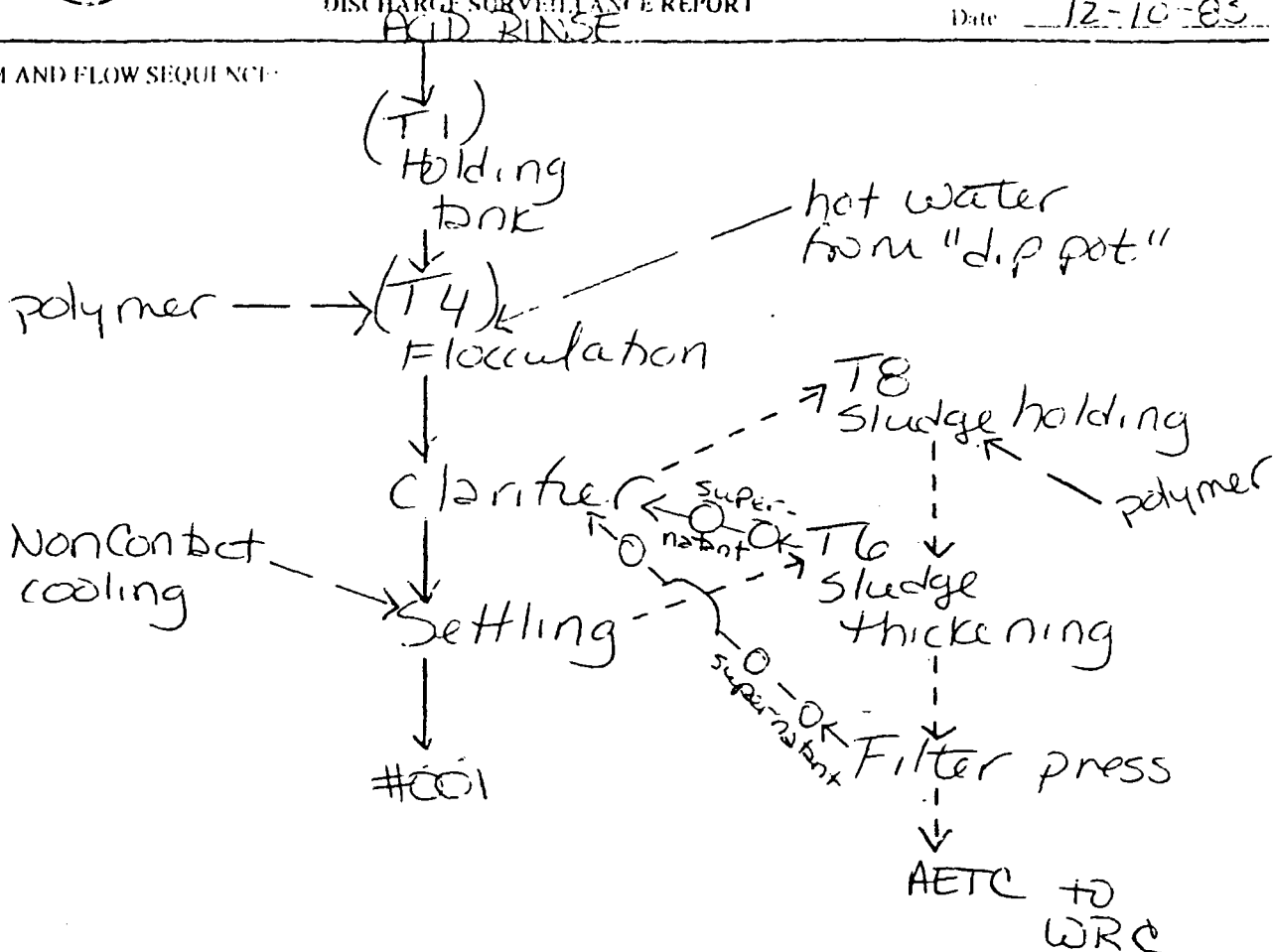
INDUSTRIAL TREATMENT PROCESS EVALUATION			
RATING CODES: S = Satisfactory M = Marginal U = Unsatisfactory NA = Not Applicable			
		RATING	COMMENTS
GENERAL	DISCHARGE #	---	001
	WASTEWATER SOURCE(S)	---	Acid Rinsewater from plating dept +
	CONTINUITY OF OPERATION	---	Gallium Arsenide dept. non conduct
	BYPASSES/OVERFLOWS	NA	cooling, and hot water from the
	S.P.C.C. PLAN	S	aluminum parts "dip pot"
	ALARM SYSTEMS	S	5-6 days x 8 hours
	ALTERNATE POWER SUPPLY	NA	3 floor drains in treatment room pump into sump pit → TB For sump pit - high water + PH not between 7-9.5 in T-1 (light) PH automatically maintained between 7-9.5 (NaOH or H ₂ SO ₄ used) polymer addition.
TREATMENT PROCESSES	(T-1) Holding Tank	S	
	(T-4) Flocculation	S	
	Clarifier	M	unit is rusting + paint is peeling
	Final Settling	S	(Plating Rm) Any spills either cyanide or acid holding tanks. Cyanide hold tank: pH ↑ by sodium hydro- sulfite. Chromic acid is broken down + waste → TB Acid holding tank: pH = 11 or 12. HTH and sodium hydro sulfite is added to break down chlorine. H ₂ SO ₄ added to ↓ pH, then waste → TB
	Sludge holding (TB)	S	
	Sludge thickening (TB)	M	rusting
	Filter press	S	
SLUDGE HANDLING	DISPOSAL SITE	S	HETC → World Resources Co, Pa for metal reclamation
	FLOW METER & RECORDER	S	Manning Dblizing meter - on final settling
INFORMATION	RECORDS	S	
	SAMPLING PROCEDURES	S	
	ANALYSES PERFORMED BY	S	VOS by Century Environmental Testing #00153, Thornfare NJ
		S	Bioassay by Atlantic Environmental Science Co #01284 Abscon NJ
		S	All remaining parameters - Lancy Labs #77269, Zellenople, Pa. 5-1-86: Now Townley not Lancy
OTHER	FINAL EFFLUENT APPEARANCE	S	Clear
	REC. WATERS APPEARANCE	NI	



DISCHARGE SURVEILLANCE REPORT

Permit # NJ0025739
Date 12-10-85

PLANT DIAGRAM AND FLOW SEQUENCE



DISCHARGE DATA

SOURCE: <u>Lab. Reports</u>				PERIOD: <u>9/19/85 ± 9/23/85</u>							
DIS	PARA	SAMPLE TYPE	PERMIT LIMITS	9/19/85	9/23/85	DIS	PARA	SAMPLE TYPE	PERMIT LIMITS	9/19/85	9/23/85
001	PH	Gr	su	7.4	7.7	001	(FOT) Cr	24hr comp	- mg/L 0.02 / 0.04 kgd	0.005 mg/L	< 0.05 mg/L
"	OrG	Gr	10/15 mg/L	25 mg/L	< 0.4	"	Cu	↓	- mg/L 0.02 / 0.04 kgd	0.09	20.17 mg/L
"	TSS	24hr comp.	0.9 / 1.8 kgd	3.6 mg/L	5.2 mg/L	"	VO's	Gr	100 mg/L	① *	0.005 mg/L
"	F		- mg/L 0.07 / 0.12 kgd	5.2 mg/L	3.6 mg/L	"	Ni	24hr comp	- mg/L 0.02 / 0.04 kgd	0.55 mg/L	< 0.01 mg/L
"	(FOT) CN		- mg/L 0.02 / 0.04 kgd	0.01 mg/L	2.0 mg/L	"	Ag	↓	- mg/L 0.002 / 0.004 kgd	< 0.01	< 0.01 mg/L
"	As		- mg/L 0.003 / 0.008 kgd	2.0 mg/L	13.5 mg/L	"	Zn	↓	- mg/L 0.02 / 0.04 kgd	0.10 mg/L	0.105 mg/L
"	Cd	↓	- mg/L 0.02 / 0.03 kgd	0.02	< 0.01 mg/L	"	TTO	Gr	2.08 mg/L	①	0.005 mg/L

MONITORING DEFICIENCIES:

(NONE)
(NOTED)

Flow - cont. - MGD - 0.0092 / 0.0128

Dil. 2.0 mg/L → Bio. assay - 9/14/85 - 96 hr LC50 > 50% - 0 → 5% M.T.

Temp - Grab - 30°C - 3.11 / 3.13

① methylene chloride 690 µg/L - all others < 5 µg/L

F-5

N.J.D.E.P.
D.W.R.

DISCHARGE SURVEILLANCE REPORT

Page 2 of 3 (I)
Permit #: NJ 00257-
Date: 12-10-85

INDUSTRIAL TREATMENT PROCESS EVALUATION			
RATING CODES: S = Satisfactory M = Marginal U = Unsatisfactory NA = Not Applicable			
		RATING	COMMENTS
GENERAL	DISCHARGE #	---	002
	WASTEWATER SOURCE(S)	---	water treatment, roof + parking
	CONTINUITY OF OPERATION	---	5-6 days/week, lot drains
	BYPASSES/OVERFLOWS	NA	except rainfall
	S.P.C.C. PLAN	↓	
	ALARM SYSTEMS	↓	
TREATMENT PROCESSES	ALTERNATE POWER SUPPLY	↓	
SLUDGE HANDLING			
	DISPOSAL SITE	NA	
INFORMATION	FLOW METER & RECORDER	S	estimated @ 960 gal/day
	RECORDS	S	
	SAMPLING PROCEDURES	S	grab 1 x month
	ANALYSES PERFORMED BY	S	Lancy Labs, # 772109 in Zellenofu, Pa
OTHER			
	FINAL EFFLUENT APPEARANCE	S	
	REC. WATERS APPEARANCE	NI	



DISCHARGE SURVEILLANCE REPORT

Permit # NJ 0025739
Date 12-10-85

PLANT DIAGRAM AND FLOW SEQUENCE

storm + roof drains + water
fountains
↓
Trib to
Whippany River

DISCHARGE DATA

SOURCE: Lab ReportPERIOD: November 4, 1985

DIS	PARA	SAMPLE TYPE	PERMIT LIMITS	DATA	DIS	PARA	SAMPLE TYPE	PERMIT LIMITS	DATA
002	pH	Gr	NA	7.35					
"	TSS	}	50 mg/l	2.4					
"	Oil & Grease		15 mg/l	7.8					
"	COD		100 mg/l	4.0					
"	flow	est.	-. mgd	0.00096					

MONITORING DEFICIENCIES: None noted



OCT 17 1986

State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
ENFORCEMENT ELEMENT - NORTHERN REGION
1259 Route 46 - Building 2
Parsippany-Troy Hills, NJ 07054

JOHN W. GASTON JR., P.E.
DIRECTOR

DIRK C. HOFMAN, P.E.
DEPUTY DIRECTOR

CERTIFIED MAIL
RETURN RECEIPT
REQUESTED

Mr. John Nicola
Airtron Division - Letton Industries, Inc.
200 East Hanover Avenue
Morris Plains, New Jersey 07950

Dear Mr. Nicola:

Re: Compliance Evaluation Inspection
Airtron Division
NJPDES No.: NJ0025739
Hanover Township, Morris County

A Compliance Evaluation Inspection of your facility was conducted by a representative of this Division on September 9, 1986. A copy of the completed inspection report form is enclosed for your information.

Your facility received a rating of "UNACCEPTABLE" due to the following deficiencies:

1. Your Discharge Monitoring Report for the period of June 1, 1986, to June 30, 1986 indicates discharge violations of your NJPDES permit following:

a. Discharge #001:	Permit Limits	Discharge
	Arsenic	0.003/0.008 kg/day 0.012/0.023 kg/day
	Cyanide	0.02/0.04 kg/day 0.03/0.06 kg/day
	Fluoride	0.07/0.12 kg/day 0.115/0.2 kg/day
- b. Discharge #002:

pH	6.0/9.0 (s.u.)	1.9/7.5 (s.u.)
----	----------------	----------------
2. A review of your Discharge Monitoring Reports for April, 1986, and May, 1986 indicates similar violations in the discharge of arsenic in excess of your NJPDES permit limits.

Since the deficiencies cited are presently, or could in the future be, adversely affecting effluent quality, you are hereby DIRECTED to institute

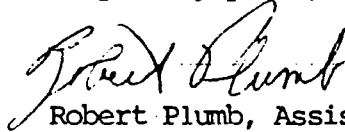
measures to correct these deficiencies.

It is noted that on June 18, 1986, the Division received a letter from Airtron detailing measures that the company was implementing to improve effluent quality. The determination of the effectiveness of these measures will be the maintenance of your discharge at below permit levels for all parameters. Both the New Jersey Water Pollution Control Act (N.J.S.A. 58:10A-1 et seq.) and the Federal Water Pollution Control Act, as amended (33 U.S.C. 466 et seq.), provide for substantial monetary and criminal penalties in cases of permit violations. Failure to fully comply with the above will result in further enforcement action by the Division. This should not be construed, however, to indicate any exemption on your part from possible penalties for violations indicated by the Compliance Evaluation Inspection, as stated above.

It is further noted that the Division is currently in the process of developing programs with Airtron to address the problems of ground-water contamination in the area of this facility.

Please direct all correspondence and inquiries to Christopher Mallery, of my staff, who is responsible for this case, who can be reached at (201) 299-7592, or by letter through this Division.

Very truly yours,



Robert Plumb, Assistant Chief
Northern Bureau of Regional Enforcement

Ell2: A56:/lw

cc: Chief Mikulka, Northern Bureau of Regional Enforcement
Paul Molinari, USEPA - Region II
Richard Baker, USEPA - Region II
Marlison Health District-Hanover Township
George Van Orden, Hanover Health Department

bcc: Robert Plumb
Chris Mallery
Tom McClachrie
• Bureau File THRU J. Mikulka and W. Mallory (Hanover, Morris)
Central File: Airtron Division-Litton Industrial, Inc.
Enforcement Actions (Colleen Hart)

Let's protect our earth



State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

DIVISION OF WATER RESOURCES

NORTHERN BUREAU OF REGIONAL ENFORCEMENT

1259 ROUTE 46, BUILDING 2
PARSIPPANY, NEW JERSEY 07054

GEORGE G. McCANN, P.E.
DIRECTOR

DIRK C. HOFMAN, P.E.
DEPUTY DIRECTOR

NOV 05 1987

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Robert A. Lagno, Vice President
Airtron Division of Litton Industries, Inc.
200 East Hanover Avenue
Morris Plains, New Jersey 07950

Dear Mr. Lagno:

Re: Compliance Evaluation Inspection
Airtron Division of Litton Industries, Inc.
NJPDES Permit No.: NJ0025739
Hanover Township, Morris County

A Compliance Evaluation Inspection of your facility was conducted by representatives of the Division of Water Resources on October 22, 1987. A copy of the completed inspection report is enclosed for your review.

Your facility received a rating of "UNACCEPTABLE" due to the following deficiencies:

1. The Discharge Monitoring Report for the period of April 1, 1987, to April 30, 1987, indicated the following discharges in excess of the facility's NJPDES permit limits:

<u>Parameter (001A)</u>	<u>Permit Limits</u>	<u>Discharge</u>
Arsenic (avg.) (kg/day)	.003	.007
Arsenic (max.) (kg/day)	.008	.010
Total Suspended Solids (avg.) (kg/day)	.9	1.45
Total Suspended Solids (max.) (kg/day)	1.8	2.27

Copper (avg.) (kg/day)	.02	.0306
Copper (max.) (kg/day)	.04	.0593

2. The Discharge Monitoring Report for the period of May 1, 1987, to May 31, 1987, indicated the following discharges in excess of the facility's NJPDES permit limits:

<u>Parameter</u>	<u>Permit Limits</u>	<u>Discharge</u>
Arsenic (avg.) (kg/day)	.003	.008
Arsenic (max.) (kg/day)	.008	.012
Total Suspended Solids (avg.) (kg/day)	.9	1.18
Total Suspended Solids	1.8	2.12

In light of these deficiencies and their effect on area water quality, you are DIRECTED to institute measures to correct these deficiencies. A written report concerning specific details of remedial measures to be instituted, as well as an implementation schedule, must be submitted to this Division and to the USEPA, Permits Administration Branch, within thirty (30) calendar days of the date of this Directive.

It is noted that some explanations of these excursions accompanied the quarterly submittal of the Discharge Monitoring Reports. However, a review of the Discharge Monitoring Reports submitted by your facility over the last two (2) years indicated a history of similar excursions. This issue will be addressed in further enforcement actions, which may include the requirement for improvement of the facility's pretreatment processes, and the possible assessment of substantial civil administrative penalties for these violations.

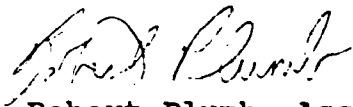
It is further noted that the pretreatment installation in the facility involves the use of substantial quantities of hazardous materials. It is of considerable importance that your facility maintain this installation in line with adequate routine and emergency safety procedures.

It was noted, during a tour of the Airtron facility at 54 Horsehill Road, that current housekeeping procedures could readily give rise to incidents of significant negative environmental impact. It is anticipated that your environmental staff will take adequate measures to insure that this situation is improved, not only through the long-term plans for modification of the facility, but also on an immediate interim basis. The facility at 54 Horsehill Road will be included in future routine NJPDES inspections.

It is also noted that the facility is currently in the process of conducting a remedial investigation of groundwater contamination at the site. A report on this investigation is due November 24, 1987.

If any questions arise concerning these matters, please contact Christopher S. Mallery, of my staff, at (201) 299-7592.

Very truly yours,



Robert Plumb, Assistant Chief
Northern Bureau of Regional
Enforcement

E112:G5.3(K2)

Attachment

c: Chief Joseph M. Mikulka, Northern Bureau of Regional Enforcement
Theodore Craver, Esq., Vice President, Litton Industries
Joseph LaSchiavo, President, Airtron Division
John Nicola, Engineer, Airtron Division
Nicholas Nitti, Environmental Engineer, Airtron Division
Leon Pieta, Engineer, Airtron Division
George VanOrden, Hanover Health Department

bc: Robert Plumb
Christopher Mallery
Thomas McClachrie
Bureau File THRU J. Mikulka and W. Mallery
Central File/Airtron Division, Hanover Township, Morris County
Enforcement Actions (Virginia Kennedy)

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
CN 029, Trenton, N.J. 08625

DISCHARGE SURVEILLANCE REPORT

PERMIT # N50025739 NO. OF DISCHARGES 002 CLASS MAJ IND DIS
DISCHARGER AIRTRON DIVISION
OWNER AIRTRON - DIVISION OF LITTON INDUSTRIES
MUNICIPALITY HANOVER TWP COUNTY MORRIS WATERSHED CODE P
LOCATION 200 EAST HANOVER AVENUE
RECEIVING WATERS TRIB TO WHIPPANY RIVER STREAM CLASS FW-2 NT
LICENSED OPERATOR & PLANT CLASS LOUIS GIGLIETTI
TRAINEE/ASSISTANT NA OTHER INFO. 201 539-5500
EOP 5-1-85

DEFICIENCIES OR COMMENTS 1. PERMIT LIMITS FOR TOTAL SUSPENDING SOLIDS, ARSENIC EXCEEDED IN APRIL AND MAY OF 1987
PERMIT LIMIT FOR COPPER EXCEEDED IN APRIL OF 1987

PARAMETER	PERMIT LIMIT	DMR
T. S. S.	0.9 ^{KG} /D AVE 1.8 ^{KG} /D MAX	1.45 AVE 0487 1.18 AVE 0587 2.37 MAY 0487 2.12 MAX 0587
AS	.003 ^{MG} /D AVE .008 ^{MG} /D MAX	.007 AVE 0487 .002 AVE 0587 .010 MAX 0487 .012 MAX 0587
CU	.02 ^{MG} /D AVE .04 ^{MG} /D MAX	.030 AVE 0487 .0593 MAX 0487

OVERALL RATING ☐ Acceptable ☐ Conditionally Acceptable ☒ Unacceptable

EVALUATOR TOM McCLACHAIE TITLE EC I III

INFORMATION FURNISHED BY (Name) JOHN NICOLA

(Title) ENV OFFICER (Organization) AIRTRON

DATE OF INSPECTION 10-23-87



DISCHARGE SURVEILLANCE REPORT



INDUSTRIAL TREATMENT PROCESS EVALUATION

RATING CODES: S = Satisfactory M = Marginal U = Unsatisfactory NA = Not Applicable

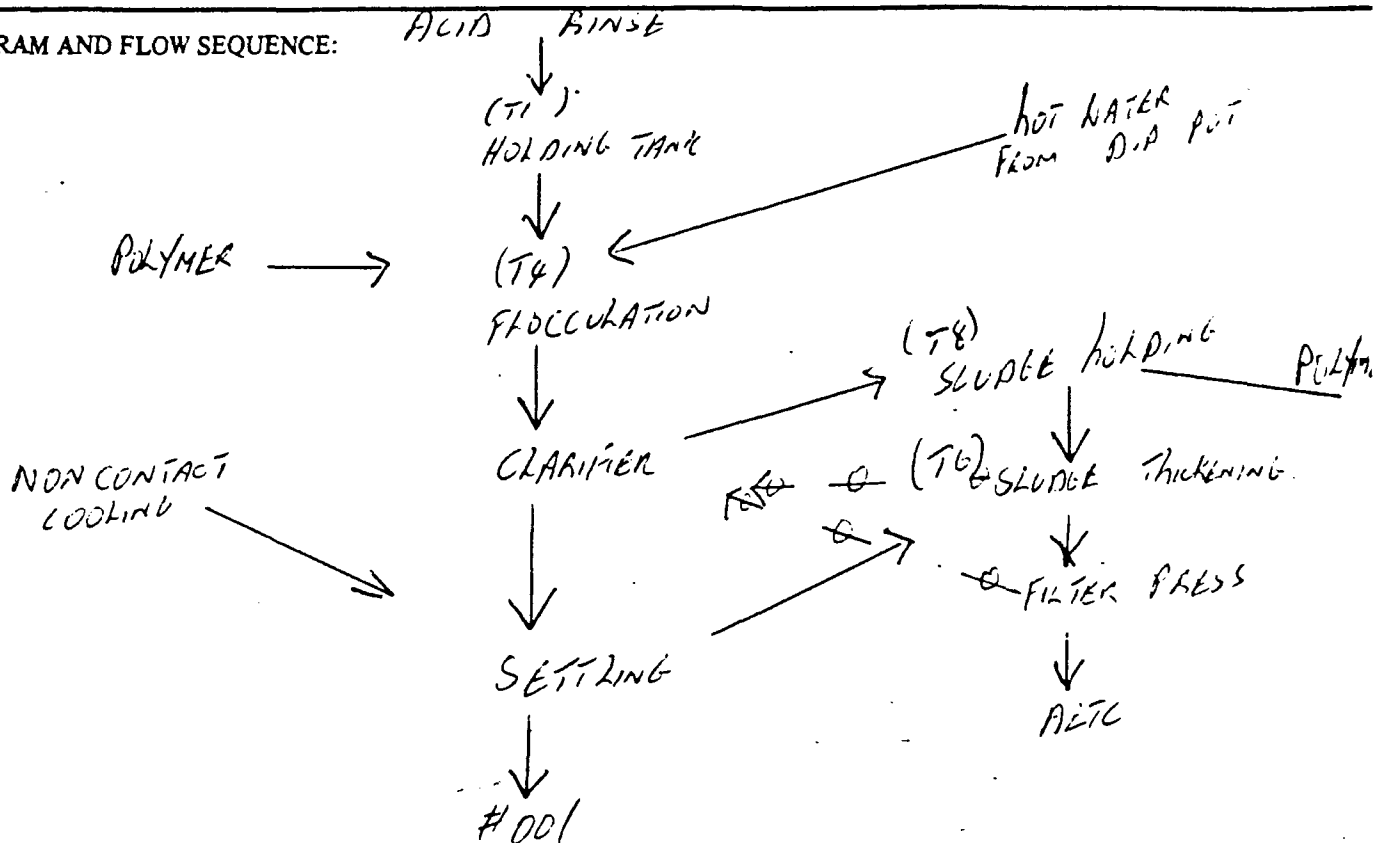
		RATING	COMMENTS
GENERAL	DISCHARGE #	---	001
	WASTEWATER SOURCE(S)	---	ACID RINSEWATER FROM PLATING DEPT &
	CONTINUITY OF OPERATION	---	GALLIUM ARSENITE DEPT, NON CONTACT
	BYPASSES/OVERFLOWS	NA	COOLING, AND HOT WATER FROM THE
	S.P.C.C. PLAN	S	ALUMINUM PARTS "DIP POT"
	ALARM SYSTEMS	S	5-6 DAYS 2HRS
	ALTERNATE POWER SUPPLY	NA	3 FLOOR DRAINING IN TREATMENT ROOM
TREATMENT PROCESSES			PUMP INTO SUMP PIT → T2
			FOR SUMP PIT - ALKALINIZER & PH
	T-1 HOLDING TANK	S	BETWEEN 7-9.50 IN T-1 (LIGHT
	T-4 FLOCCULATION	S	PH AUTOMATICALLY MAINTAINED BETWEEN
			7-9.50 (NADA OR H ₂ SO ₄ USED)
	CLARIFIER	S	POLYMER ADDITION
	FINAL SETTLING	S	
SLUDGE HANDLING			(PLATING ROOM) ANY SPILLS EITHER
			CYANIDE OR ACID HOLDING TANKS
			CYANIDE HOLD TANK: PH ↑ BY
			SODIUM HYDRO SULFITE. CHEMICAL
			ACID IS BROKEN DOWN + WASTE → T2
			ACID HOLDING TANK: PH = 10 → 12. H ₂ O
			AND SODIUM HYDRO SULFITE IS ADDED
OTHER INFORMATION			TO BREAK DOWN CHLORINE. H ₂ SO ₄
			ADDED TO ↓ PH, THEN WASTE → T2
	SLUDGE HOLDING (T2)	S	
	SLUDGE THICKENING (T6)		
	FILTER PRESS	S	
	DISPOSAL SITE	S	ARETE & WORLD RESOURCES CO, PA FOR
			METAL RECLAMATION
OTHER INFORMATION	FLOW METER & RECORDER	S	MANNING TOTALIZING METER - ON FINAL
	RECORDS	S	SETTLING
	SAMPLING PROCEDURES	S	
	ANALYSES PERFORMED BY	S	BURRAY BY ATLANTIC ENVIRONMENTAL
			SCIENCE CO & UTILA ASSOC. NJ
			ALL REMAINING PARAMETERS
			TOWNLET LABS
OTHER INFORMATION	FINAL EFFLUENT APPEARANCE	S	
	REC. WATERS APPEARANCE	S	CLEAR



DISCHARGE SURVEILLANCE REPORT

Permit # NJCC25739
Date 10-23-87

LANT DIAGRAM AND FLOW SEQUENCE:



DISCHARGE DATA

SOURCE: DMR

PERIOD: 87-06-01

DIS	PARA	SAMPLE TYPE	PERMIT LIMITS	DATA	DIS	PARA	SAMPLE TYPE	PERMIT LIMITS	DATA
001	TEMP	COMP	30° max	21°	001	CD	COMP	.012 - .031 ^{KG/D}	0
	FLOW	CONT	GPD	130606GPD		CR		.027 - .04 ^{KG/D}	.0014 ^{KG/D}
	PH	GRAB	6 - 9.50	7.6 ⁵⁰ MAX		CU		.02 - .04 ^{KG/D}	.0055 ^{KG/D}
	TSS	COMP	9 ^{KG/D} max A.C. 1.2 ^{KG/D} max	.07 ^{KG/D} max		N		.027 - .04 ^{KG/D}	.0135 ^{KG/D}
	ON	GRAB	.02 - .04 ^{KG/D}	0		Ag	✓	.0027 - .004 ^{KG/D}	.0006 ^{KG/D}
	F	COMP	.07 - .12 ^{KG/D}	.027 - .024 ^{KG/D}		ZN		.02 ^{KG/D}	.0014 ^{KG/D}
	AS	1'	.003 - .008 ^{KG/D}	.003 ^{KG/D}		VO		100 ^{KG/D}	14.6 ^{KG/D}

MONITORING DEFICIENCIES:

N.J.D.E.P.
D.W.R.

DISCHARGE SURVEILLANCE REPORT



Page 2 of 3 (I)

Permit #: NJ DW 25739

Date: 10-23-87

INDUSTRIAL TREATMENT PROCESS EVALUATION

RATING CODES: S = Satisfactory M = Marginal U = Unsatisfactory NA = Not Applicable

		RATING	COMMENTS
GENERAL	DISCHARGE #	---	002
	WASTEWATER SOURCE(S)	---	WATER FOUNTAIN ROOF & PARKING
	CONTINUITY OF OPERATION	---	5-6 DAYS /WK
	BYPASSES/OVERFLOWS	NP	LOT DRAINS
	S.P.C.C. PLAN	✓	
	ALARM SYSTEMS		
	ALTERNATE POWER SUPPLY		
TREATMENT PROCESSES			
SLUDGE HANDLING			
	DISPOSAL SITE	NP	
INFORMATION	FLOW METER & RECORDER	S	ESTIMATED 9/2 6AL/DAY
	RECORDS	S	
	SAMPLING PROCEDURES	S	6 LAB 1X MONTH
	ANALYSES PERFORMED BY	S	TOWNLEY LABS
OTHER	FINAL EFFLUENT APPEARANCE	S	
	REC. WATERS APPEARANCE	S	



DISCHARGE SURVEILLANCE REPORT

Permit # NS0025739

Date 10-23-07

PLANT DIAGRAM AND FLOW SEQUENCE:

STORM + ROOF DRAIN + WATER FOUNTAINS

✓

TRIB. OF NARAPAN RIVER

DISCHARGE DATA

SOURCE:

DMR

PERIOD:

87-06-01

[illegible]

MONITORING DEFICIENCIES:

Let's protect our earth



State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

DIVISION OF WATER RESOURCES

NORTHERN BUREAU OF REGIONAL ENFORCEMENT

1259 ROUTE 46, BUILDING 2
PARSIPPANY, NEW JERSEY 07054

GEORGE G. McCANN, P.E.
DIRECTOR

DIRK C. HOFMAN, P.E.
DEPUTY DIRECTOR

JUN 08 1988

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Robert A. Lagno, Vice President
Airtron Division of Litton Industries, Inc.
200 East Hanover Avenue
Morris Plains, New Jersey 07950

Dear Mr. Lagno:

Re: Compliance Evaluation Inspection
Airtron Division of Litton Industries, Inc.
NJPDES Permit No: NJ0025739
Hanover Township, Morris County

A Compliance Evaluation Inspection of your facility was conducted by representatives of the Division of Water Resources on April 14, 1988. A copy of the completed inspection report is enclosed for your review.

Your facility received a rating of "UNACCEPTABLE" due to the following deficiencies:

1. A review of recent Discharge Monitoring Reports indicated discharges in excess of the limits contained in the facility's NJPDES permit, for volatile organic compounds for the following periods:

Month:	DMR(Permit limit-100 milligrams/liter)
November, 1987	112 mg/l
December, 1987	1719.85 mg/l
January, 1988	162 mg/l
February, 1988	121 mg/l

2. Regular spills of process chemicals in the chemical rinse room were not being properly cleaned up. The presence of prolonged chemical spillage in the work area constitutes an increased safety hazard to plant personnel.

3. A tree had fallen across discharge pipe # 001, and had not been removed at that time.

NOTE: Your treatment plant requires an N-2 licensed operator.

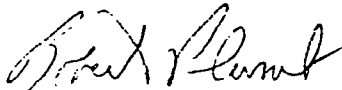
In that these deficiencies are currently adversely affecting, or could in the future adversely affect, area water quality, you are DIRECTED to institute measures to correct these deficiencies. A written report concerning specific details of remedial measures to be instituted, as well as an implementation timetable, must be submitted to this Division and to the USEPA, Permits Administration Branch, within thirty (30) calendar days of the date of this Directive.

Failure to comply with this Directive will result in further enforcement action, including the possible assessment of substantial civil administrative penalties, pursuant to N.J.A.C. 7:14-8.1 et seq.

It is noted that the Department has recently received from its geologists comments based on their review of the Soil and Groundwater Remedial Investigation-Phase I, submitted by Converse Environmental East in November, 1987. It is anticipated that a meeting will be scheduled for the near future to review these comments with your consultants, so that the investigation of the groundwater contamination at your facility can proceed.

If any questions arise concerning these matters, please contact Christopher Mallery, of my staff, at (201)299-7592.

Very truly yours,



Robert Plumb, Assistant Chief
Northern Bureau of Regional
Enforcement

E112:gw
Attachment

c: Chief Joseph M. Mikulka, Northern Bureau of Regional Enforcement
Theodore Craver, Esq., Vice President, Litton Industries
Joseph LaSchiavo, President, Airtron Division
John Nicola, Engineer, Airtron Division
Nicholas Nitti, Environmental Engineer, Airtron Division
Dr. George VanOrden, Hanover Health Department

bc: Robert Plumb
Christopher Mallery
Thomas McClachrie
Bureau File THRU J. Mikulka and W. Malloy
Central File/Airtron Division, Hanover Township, Morris County
Enforcement Actions (Virginia Kennedy)

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
CN 029, Trenton, N.J. 08625

DISCHARGE SURVEILLANCE REPORT

PERMIT # NJ0025739 NO. OF DISCHARGES 002 CLASS MAJ IND DSH
DISCHARGER AIRTRON DIVISION
OWNER AIRTRON - DIVISION OF LITTON INDUSTRIES
MUNICIPALITY HANOVER TWP COUNTY MORRIS WATERSHED CODE P
LOCATION 200 EAST HANOVER AVENUE
RECEIVING WATERS TAIB → WHIPPANY RIVER STREAM CLASS FW-2 NT
LICENSED OPERATOR & PLANT CLASS LOUIS GHIGHIETTI N-N PLANT CLASS N-2
TRAINEE/ASSISTANT BOB SMITH OTHER INFO. 201 539-5500

DEFICIENCIES OR COMMENTS PERMIT LIMIT FOR VOLATILE
ORGANICS WAS EXCEEDED IN THE FOLLOWING
MONITORING PERIODS

DATE	DISCHARGE	DO1	PERMIT LIMIT	PMR
11/87	VO's		MAX 100 mg/L	112 mg/L
12/87	"		" " "	1719.85 mg/L
1/88	"		" " "	162 mg/L
2/88	"		" " "	121 mg/L

OVERALL RATING ☐ Acceptable ☐ Conditionally Acceptable ☒ Unacceptable

EVALUATOR TOM McCLACHAIE TITLE ENV SPEC TRAIN

INFORMATION FURNISHED BY (Name) NICK NITTI

(Title) ENV OFFICER (Organization) AIRTRON

DATE OF INSPECTION 4-14-88

2. Spills are not cleaned up in your chemical rinse room.

3. Fallen tree across discharge pipe #001

NOTE:

Your Treatment Plant requires an N-2 Licensed Operator.


N.J.D.E.P.
D.W.R.

DISCHARGE SURVEILLANCE REPORT



Page 2 of 3 (I)

Permit #: NJ0025739

Date: 04-14-88

INDUSTRIAL TREATMENT PROCESS EVALUATION

RATING CODES: S = Satisfactory M = Marginal U = Unsatisfactory NA = Not Applicable

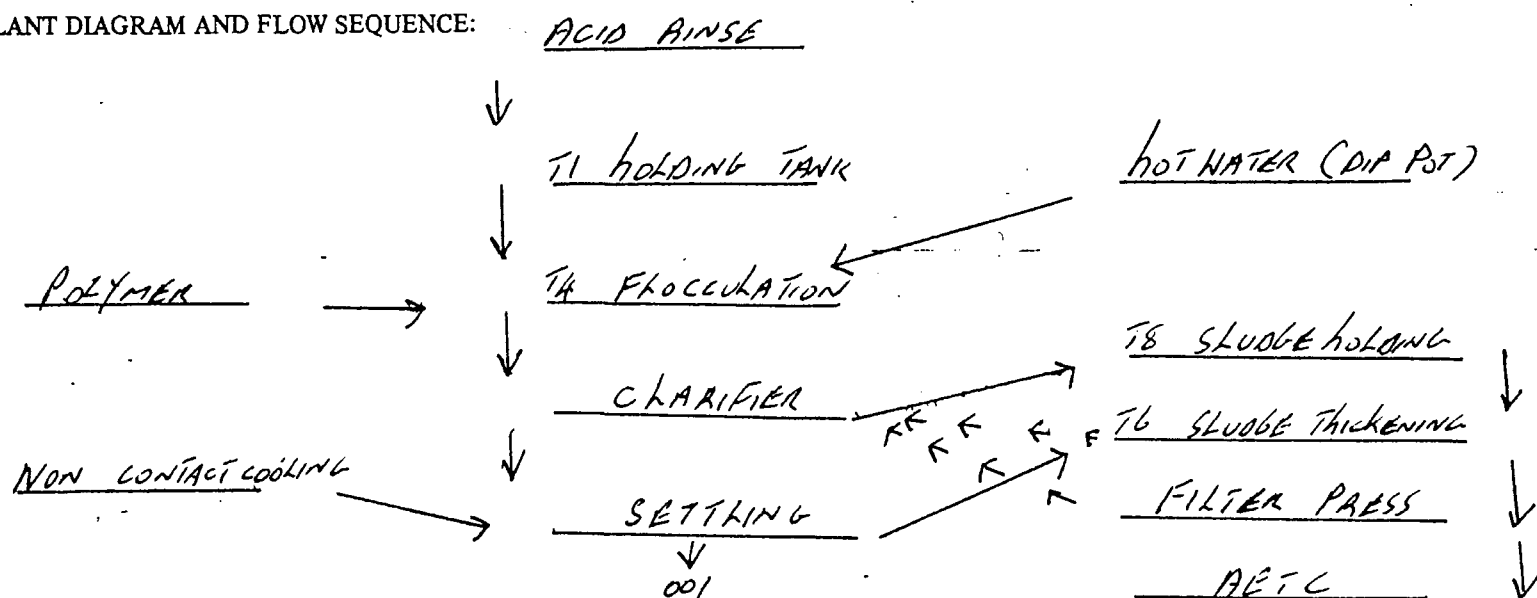
		RATING	COMMENTS
GENERAL	DISCHARGE #	---	001
	WASTEWATER SOURCE(S)	---	ACID RINSE WATER FROM PLATING DEPT & GALLIUM
	CONTINUITY OF OPERATION	---	ARSENITE DEPT., NON CONTACT COOLING
	BYPASSES/OVERFLOWS	NA	AND HOT WATER FROM THE ALUMINUM PARTS
	S.P.C.C. PLAN	S	"DIP POT"
	ALARM SYSTEMS	S	5-6 DAYS X 8 HRS
	ALTERNATE POWER SUPPLY	NA	WILL UPDATE PLAN
TREATMENT PROCESSES			3 FLOOR DRAINS IN TREATMENT ROOM
			PUMP INTO SUMP PIT T-8
			ALSO A HOLE IN WALL DRAINS THE
			BEAK CONTAINMENT AREA OF RINSE ROOM
	T-1 HOLDING TANK	S	BETWEEN T-9SU IN T-1
	T-4 FLOCCULATION		PH AUTOMATICALLY MAINTAINED BETWEEN
			T-9SU (NAOH OR H ₂ SO ₄ USED)
SLUDGE HANDLING	CLARIFIER	S	POLYMER ADDITION
	FINAL SETTLING	S	
			(PLATING ROOM) ANY SPILLS EITHER
			CYANIDE OR ACID HOLDING TANKS
			CYANIDE HOLD TANK PH BY
			SODIUM HYDRO SULFITE. CHROMIC
			ACID IS BROKEN DOWN & WASTE T-8
OTHER			ACID HOLDING TANK: PH=11.712. HTH
			AND SODIUM HYDROSULFITE IS ADDED
			TO BREAK DOWN CHLORINE. H ₂ SO ₄
			ADDED TO V PH THEN WASTE T-8
			NOTE - THE ADDITION OF H ₂ SO ₄ FROM
			CONTAINERS SET ON THE FLOOR - CONTAINERS
			ARE OPEN IS INHERENTLY UNSAFE
INFORMATION	SLUDGE HOLDING (T-8)	S	
	SLUDGE SETTLING (T-6)		
	FILTER PRESS	S	
	DISPOSAL SITE	S	AT&T WORLD RESOURCES CO. PA FOR
			METAL RECLAMATION
	FLOW METER & RECORDER	S	MANNING TOTALIZING METER - ON FINAL
	RECORDS	S	SETTLING
OTHER	SAMPLING PROCEDURES	S	
	ANALYSES PERFORMED BY	S	BIOASSAY BY ATLANTIC ENVIRONMENTAL
			SCIENCE CO 01284 ABSECON NJ
			ALL REMAINING PARAMETERS TONNEY
			LABS
	FINAL EFFLUENT APPEARANCE	S	
	REC. WATERS APPEARANCE	S	CLEAR



DISCHARGE SURVEILLANCE REPORT

Permit # NJ0025739Date 04-14-88

PLANT DIAGRAM AND FLOW SEQUENCE:



DISCHARGE DATA

SOURCE: DMRPERIOD: JAN 1988

DIS	PARA	SAMPLE TYPE	PERMIT LIMITS	DATA	DIS	PARA	SAMPLE TYPE	PERMIT LIMITS	DATA
001	TEMP	COMP	AVG	15.5 °C	001	CR	COMP	.02/.04 KG/D	.0008/.0013 KG/D
	PH	GR	6-9.5U	7.2/8.45U		CU	COMP	.02/.04 KG/D	.0016/.0022 KG/D
	TSS	COMP	.9/.180 KG/D	.09/.170 KG/D		N1	COMP	.02/.04 KG/D	.0025/.0037 KG/D
	CN	GR	.02/.04 KG/D	0		ZN	COMP	.02/.04 KG/D	.0014/.0014 KG/D
	F	COMP	.07/.12 KG/D	.01/.01 KG/D		FLON	CONT	MG/D AVG	.0061 MG/D
	AS	COMP	.003/.008 KG/D	.002/.003 KG/D		VO	GR	100 UG/L	162 UG/L
	CD	COMP	.012/.031 KG/D	0					

MONITORING DEFICIENCIES:



N.J.D.E.P.
D.W.R.

DISCHARGE SURVEILLANCE REPORT



Page 2 of 3 (I)
Permit #: NJ 0025739
Date: 04-14-88

INDUSTRIAL TREATMENT PROCESS EVALUATION

RATING CODES: S = Satisfactory M = Marginal U = Unsatisfactory NA = Not Applicable

	RATING	COMMENTS
GENERAL	DISCHARGE #	002
	WASTEWATER SOURCE(S)	WATER FOUNTAINS ROOF & PARKING
	CONTINUITY OF OPERATION	5-6 DAYS / WK LOT DRAINS
	BYPASSES/OVERFLOWS	NA
	S.P.C.C. PLAN	✓
	ALARM SYSTEMS	
	ALTERNATE POWER SUPPLY	
TREATMENT PROCESSES		
SLUDGE HANDLING		
INFORMATION	DISPOSAL SITE	NA
	FLOW METER & RECORDER	S ESTIMATED 960 GAL/DAY
	RECORDS	S
	SAMPLING PROCEDURES	S GRAB 1X MTH
	ANALYSES PERFORMED BY	S TONNKEY LABS
OTHER	FINAL EFFLUENT APPEARANCE	S
	REC. WATERS APPEARANCE	S



DISCHARGE SURVEILLANCE REPORT

Permit # NJ0025739Date 04-14-88

PLANT DIAGRAM AND FLOW SEQUENCE:

STORM - ROOF DRAINS - WATER FOUNTAINS↓
002

DISCHARGE DATA

SOURCE: DMRPERIOD: JAN 1988

DIS	PARA	SAMPLE TYPE	PERMIT LIMITS	DATA	DIS	PARA	SAMPLE TYPE	PERMIT LIMITS	DATA
002	COD	GR	100 M/L	61 M/L					
	PH		6-9.50	7.2-8.3					
	TSS		50 M/L	3 M/L					
	DOB		15 M/L	6.8 M/L					
	FLOW		MGD	.0012 MGD					

MONITORING DEFICIENCIES:

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF ENVIRONMENTAL QUALITY
BUREAU OF ENFORCEMENT OPERATIONS

PLANT ID #	INSPECTOR ASSIGNED
25136	616

FIELD INVESTIGATION ASSIGNMENT REPORT

DATE ASSIGNED	DATE DUE
6-1-89	6-30-89
DATE COMPLETED	COUNTY
10-19-89	Morris

COMPANY NAME Litton IndustriesLOCATION 200 E. Hanover Ave., Morris PlainsCDS CLASS: A1 ___ A2 ___ B A NSPS ___ NESHAPS ___ PSD ___AIR GRANT (105): ☐ Yes ☐ No PLLT: PT ___ S2 ___ CO ___ N2 ___ VO ___ Other ___

TYPE OF ASSIGNMENT

☐ Complaint ☒ APEDS☐ Order Followup☒ Other (by code) RTK

CYCLE

COMPLAINANT NAME _____ PHONE # _____

COMPLAINANT ADDRESS _____

DATE RECEIVED _____ TIME RECEIVED _____ RECORDED BY _____

ASSIGNMENT _____

PLANT CONTACT Nicholas NithiTITLE Environ. & Safety Compliance Engr.ARRIVAL TIME AT PLANT 0940TOTAL ASSIGNMENT TIME 88STACKS INSPECTED 25 TEMPS _____TOTAL SOURCES INSPECTED 26

DEQ-012 COMPLETED FOR SUBCHAPTERS _____

SUBCHAPTER	# INSP
8	15
3	2
6	20
16	3
OTHER	

TYPE SAMPLE COLLECTED _____

OF SAMPLES COLLECTED _____

COMMENTS (by code) 001 005 008

DETAILS OF INSPECTION

See attached Field Investigation ReportMr. Nithi showed me a copy of the company's completed 1988 RTK survey.The company is engaged in the manufacture of various size and shape aluminum radar microwave guide bars, and performs the fabrication, treatment and coating of these bars.

INSPECTOR'S SIGNATURE

TITLE: Sr. Env. Engr.

SUPERVISOR'S REVIEW

INITIALS: RW DATE: 10-31-89SEE ATTACHED FOR ADDITIONAL INFORMATION: ☒ YES ☐ NO

New Jersey Department of Environmental Protection
Division of Environmental Quality — Bureau of Enforcement Operations

FIELD INVESTIGATION REPORT

CASE DESIGNATION Litton Industries, ID #25136
Morris PlainsDATE 10-19-89

NS TIME-	UPDATE/COMMENTS
001,002	Boilers #1 & #2 (250 HP & 300 HP): Neither unit in operation. Both are currently G-F. Plans call for the conversion of both units from #4 fuel oil to natural gas. I informed Mr. Nithi of the P/C requirements for such an alteration.
003	UG 10,000 gal #4 fuel oil tank: G-F
004	Stencilling spray booth w/ filters (G-F): Not in operation. Use of VOS coatings 1 pint/day max (sub 16 exempt). VEM-005 submitted to clarify designation as APEDS.
005 (CP) 010 and	These stacks cover the company's plating room operations. The operations consist of many plating tanks of various sizes and functions, which are vented indirectly through several ceiling and
014 to 018	wall fans (see attached diagram of company's discharge points -- this diagram is not up to date, according to Mr. Nithi). The room also features 2 ovens and 1 grit blaster (one of this equipment in use). Mr. Nithi claims all of the tanks and other equipment is approximately 30 years and unchanged. He claims that only some of the fans' orientations have changed. It is unclear why the company applied for P/C's to cover some of the discharge points for apparently G-F equipment. It also is unclear by examining the P/C's the number and nature of the tanks. Mr. Nithi indicated that the company is in the process of thoroughly diagramming the plating room. He estimates that the job will be done in several months. He agreed to send me at that time a copy of the diagram, which will include: the fans' orientations, tanks' locations, capacities and contents, and description of other equipment. We can then use this information at the next APEDS inspection to decide which equipment is covered by which P/C, and which equipment should remain G-F. If Mr. Nithi does not follow through on this agreement, we will have to condition the P/C's on renewal in 10/91 to require this information.
011	#13 Cu AS area: operating in compliance.
012	#6 Batch Treatment / Dip Pot: operating in compliance (Dip Pot Furnace).
013	#7 Batch Treatment / Dip Pot: operating in compliance. This operation consists of two tanks that vent to the room.
	NOTE: 012 and 013 are located in the same room.
014	#58 Colag Scrubber: operating in compliance. The P/C calls for the emissions before control of 0.11 #/hr of Arsenic for each of two sources (NOTE: the equipment that was located in the "mixing" and "rilling" rooms are now in several rooms. The company claims that only the walls, and not the pickups, have changed). When (and if) the revised Sub 17 includes As, this stack should most likely be a candidate for stack testing.
020	#56 Fluoride Lab Scrubber: not in operation.
021	#20 Cleaning and Plating oven: not in operation.

Supervisor Signature

Investigator Signature

COPIES:

White - DEQ File

Yellow - BES

Pink - Other

1-3

TO WEST DRIVEWAY

55

#54

58

56

57

42

43

44

37

38

40

41

39

27

26

25

24

23

13

14

15

16

17

18

19

11

12

10.5

10

9

8

6

7

1

2

3

4

5

approximate
area of
plating room



54

53

52

12.5

20

21

22

32

33

35

36

34

30

31

28

29

45

46

47

48

49

TO HANOVER AVENUE

50

51

TO EAST DRIVEWAY

• STACK IDENTIFICATION ATTACHED

10 #25136
Loc # 10-19-89

h-r

PLANT ID #	INSPECTOR ASSIGNED
25136	616

FIELD INVESTIGATION ASSIGNMENT REPORT

DATE ASSIGNED	DATE DUE
6-1-89	6-30-89
DATE COMPLETED	COUNTY
10-19-89	Morris

COMPANY NAME Litton Industries

LOCATION 200 E. Hanover Ave., Morris Plains

CDS CLASS: A1 _____ A2 _____ B _____ NSPS _____ NESHAPS _____ PSD _____

AIR GRANT (105): ☐ Yes ☐ No PLLT: PT _____ S2 _____ CO _____ N2 _____ VO _____ Other _____

COMPLAINANT NAME _____ PHONE # _____

COMPLAINANT ADDRESS _____

DATE RECEIVED _____ TIME RECEIVED _____ RECORDED BY _____

ASSIGNMENT See attached - TC PA Inspection

PLANT CONTACT Nicholas N: Hi

TITLE Environ. & Safety Compliance Engr.

ARRIVAL TIME AT PLANT 0940

TOTAL ASSIGNMENT TIME 7

STACKS INSPECTED _____ TEMPS _____

TOTAL SOURCES INSPECTED _____

DEQ-012 COMPLETED FOR SUBCHAPTERS

TYPE SAMPLE COLLECTED _____

OF SAMPLES COLLECTED _____

COMMENTS (by code) _____

DETAILS OF INSPECTION The company stores nitric acid only at 38% concentration. Three containers of 38% nitric acid, each weighing 146 #, were stored on site. No 94.5% nitric acid was observed to be stored on site. No other EHS was observed to be stored on site above, at or near its RQ. Two - 150 # cylinders of HF were stored on site, below the RQ of 500 #.

[illegible]

COMPLAINT	TYPE	NUMBER

Time/Date at _____
Complainant _____/_____
Verified: ☐ Yes ☐ No
Give details below

VIOLATION FOLLOWUP INSPECTION
Violation Log # _____
Order Dated _____
Subchapter Violated _____
Compliance Achieved ☐ Yes ☐ No
Give details below

INSPECTOR'S SIGNATURE

TITLE: Sr. Engr. Engr.

SUPERVISOR'S REVIEW

INITIALS: PW DATE: 10-31-88

SEE ATTACHED FOR ADDITIONAL INFORMATION: ☒ YES ☐ NO

j-6

LITTON INDUSTRIES

PORTON

ATTN: ENV. OFF. PLT : 25136

200 E. HANOVER AVE.

MORRIS PLAINS NJ 07950

nitric acid

73

J-7

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF ENVIRONMENTAL QUALITY
BUREAU OF ENFORCEMENT OPERATIONS

PLANT ID #	INSPECTOR ASSIGNED
25136	090

FIELD INVESTIGATION ASSIGNMENT REPORT

DATE ASSIGNED	DATE DUE
9-15-88	9-30-88
DATE COMPLETED	COUNTY
9/20/88	Monmouth

COMPANY NAME Airtron, Div of Littor

LOCATION _____

CDS CLASS: A1 _____ A2 _____ B _____ NSPS _____ NESHAPS _____ PSD _____

AIR GRANT (105): ☐ Yes ☐ No PLLT: PT _____ S2 _____ CO _____ N2 _____ VO _____ Other _____

TYPE OF ASSIGNMENT

- ☐ Complaint ☐ APEDS
☐ Order Followup
☒ Other (by code) 011A

CYCLE

COMPLAINANT NAME _____ PHONE # _____

COMPLAINANT ADDRESS _____

DATE RECEIVED _____ TIME RECEIVED _____ RECORDED BY _____

ASSIGNMENT See Attached Sample Results - etc?

PLANT CONTACT _____

TITLE _____

ARRIVAL TIME AT PLANT _____

TOTAL ASSIGNMENT TIME 4

STACKS INSPECTED _____ TEMPS _____

TOTAL SOURCES INSPECTED _____

DEQ-012 COMPLETED FOR SUBCHAPTERS _____

SUBCHAPTER	# INSP
8	1
16	1
OTHER	

TYPE SAMPLE COLLECTED _____

OF SAMPLES COLLECTED _____

COMMENTS (by code) 001

DETAILS OF INSPECTION

RESULTS INDICATE COMPLIANT COATING WITH SUB 16.
THIS IS A G/F PIECE OF EQUIPMENT.

COMPLAINT	TYPE	NUMBER
Time/Date at Complainant _____		
Verified: <input type="checkbox"/> Yes <input type="checkbox"/> No		
Give details below		
VIOLATION FOLLOWUP INSPECTION		
Violation Log # _____		
Order Dated _____		
Subchapter Violated _____		
Compliance Achieved <input type="checkbox"/> Yes <input type="checkbox"/> No		
Give details below		

SEE ATTACHED FOR ADDITIONAL INFORMATION: ☒ YES ☐ NO

INSPECTOR'S SIGNATURE

Andrew Egan
TITLE: Pin Ins Spec.

SUPERVISOR'S REVIEW

INITIALS: dw DATE: 9-20-88



State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

DIVISION OF WATER RESOURCES

NORTHERN BUREAU OF REGIONAL ENFORCEMENT

1259 ROUTE 46, BUILDING 2
PARSIPPANY, NEW JERSEY 07054

NOV 22 1989

Nicholas J. Nitti, Environmental and
Safety Compliance Engineer
Litton Industries, Incorporated
Airtron Division
200 East Hanover Avenue
Morris Plains, New Jersey 07958-2496

Dear Mr. Nitti:

Re: Compliance Evaluation Inspection
Litton Industries, Incorporated - Airtron Division
NJPDES No.: NJ0025739
Munic/County: Hanover Township, Morris County

A Compliance Evaluation Inspection of your facility was conducted by a representative of this Division on June 27, 1989. A copy of the completed inspection report form is enclosed for your information.

Your facility received a rating of "CONDITIONALLY ACCEPTABLE" due to the following deficiencies:

1. Your facility violated its volatile organics permit limitation at outfall 001 in July 1988, and it was indicated to the Department's representative during the inspection that effluent limit excursions were most likely to occur during the annual plant shutdown in July;
2. Flow values at outfall 002 are not being reported in the manner required by the permit. Should your Company wish to continue reporting estimated flow values, it must receive the written approval of the Bureau of Industrial Discharge Permits;
3. Not all parameters required to be analyzed by your NJPDES permit are being analyzed by a State certified laboratory.

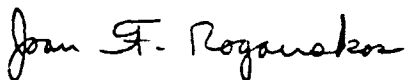
Since the deficiencies cited are generally NJPDES permit violations, you are required to institute measures to correct the deficiencies. A written report concerning specific details of remedial measures to be instituted, as well as an implementation timetable, must be submitted

to this Department and USEPA, Permits Administration Branch within thirty (30) calendar days of the date of this correspondence. In addition, please be advised that this Compliance Evaluation Inspection pertains to your Company's surface water discharge and does not pertain at all to the ground water remediation investigation occurring at your facility.

Both the New Jersey Water Pollution Control Act (N.J.S.A. 58:10A-1 et seq.) and the Federal Water Pollution Control Act, as amended (33 U.S.C. 466 et seq.) provide for substantial penalties in cases of permit violations.

Please direct all correspondence and inquiries to Lisa Rae Tracy, of my staff, who can be reached at (201) 299-7592 or by letter through this Division.

Very truly yours,



Joan F. Rogauskas, Acting Section Chief
Surface Water and Sewer System
Enforcement
Northern Bureau of Regional
Enforcement

E114:dc

Enclosure

c: Chief Joseph M. Mikulka, Northern Bureau of Regional Enforcement
Patrick Durack, USEPA - Region II
Chief, Permits Administration Branch, USEPA - Region II
Chief Robert Oberthaler, Bureau of Industrial Discharge Permits
Hanover Township Health Department
Madison Health District

bc: Lisa Tracy
Bureau File THRU J. Rogauskas
Central File/NJPDES: NJ0025739 (01)
Enforcement Actions (Virginia Kennedy)



NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
CN 029, Trenton, N.J. 08625



DISCHARGE SURVEILLANCE REPORT

PERMIT # NJ0025739 NO. OF DISCHARGES 2 CLASS MAJ-IND-S
DISCHARGER Litton Industries, Inc - Airtron Div.
OWNER Same
MUNICIPALITY Hanover Twp COUNTY Morris WATERSHED CODE P
LOCATION 200 East Hanover Ave.
RECEIVING WATERS Trib to Whippany River STREAM CLASS FW2-NT
LICENSED OPERATOR & PLANT CLASS Nicholas Nitti N-4 (N-2 req.)
TRAINEE/ASSISTANT Robert Smith N-1 OTHER INFO. (201) 539-5500
EDP - 5-1-85

DEFICIENCIES OR COMMENTS 1. Exceeded permit limit for
volatile organics in July 1988 (#001)
2. Flow (#002) estimated
once previously + reported each month
3. pH (#001) must be done by
acertified laboratory.

OVERALL RATING ☐ Acceptable ☒ Conditionally Acceptable ☐ Unacceptable

EVALUATOR Lisa Rae Tracy TITLE Sr. Env. Spec.
INFORMATION FURNISHED BY (Name) Nicholas J. Nitti
(Title) Env + Safety Compliance Eng. (Organization) Litton Inds - Airtron Div

DATE OF INSPECTION 27 June '89

Airtron

INDUSTRIAL TREATMENT PROCESS EVALUATION

RATING CODES: S = Satisfactory M = Marginal U = Unsatisfactory NA = Not Applicable		
	RATING	COMMENTS
GENERAL	DISCHARGE #	001
	WASTEWATER SOURCE(S)	---
	CONTINUITY OF OPERATION	---
	BYPASSES/OVERFLOWS	---
	S.P.C.C. PLAN	NA
	ALARM SYSTEMS	---
	ALTERNATE POWER SUPPLY	NA
TREATMENT PROCESSES	Neutralization (T-1)	w/ lime, ferric chloride, H ₂ SO ₄ feeds - c
	Floculation (T-2)	polymer feed prior to unit
	Clarification	
	Batch A s + x tank	T-8
	Batch F + x tank	T-6. Also receives cyanide + acid hold tanks' wastewater + clarifier sludge
SLUDGE HANDLING	Filter press	Filtrate returns to neutralization tank
EPA ID # NJD030239412	DISPOSAL SITE	- via AETC
INFORMATION	FLOW METER & RECORDER	S Drexel brook totalizing meter -
	RECORDS	S Final settling tank. Calib 6-9-89
	SAMPLING PROCEDURES	S T-7
	ANALYSES PERFORMED BY	Townley Research + Consulting # 18071
		Aqua Survey, Inc # 10309
		Trace Technologies, Inc # 18478
OTHER		Facility currently records + reports its own pH values - is not certified to do so
	FINAL EFFLUENT APPEARANCE	S clear
	REC. WATERS APPEARANCE	S Clear but very red tone above & below outfall

N.J.D.E.P.
D.W.R.

DISCHARGE SURVEILLANCE REPORT



Page 2 of 3 (I)

Permit #: NJ6025739

Date: 27 June 89

Airtron

INDUSTRIAL TREATMENT PROCESS EVALUATION

RATING CODES: S = Satisfactory M = Marginal U = Unsatisfactory NA = Not Applicable

	RATING	COMMENTS
GENERAL	DISCHARGE # 002	1 water fountain, stormwater from parking lot + roof drains
	WASTEWATER SOURCE(S)	
	CONTINUITY OF OPERATION	
	BYPASSES/OVERFLOWS	
	S.P.C.C. PLAN	
	ALARM SYSTEMS	
	ALTERNATE POWER SUPPLY	
TREATMENT PROCESSES		
SLUDGE HANDLING		
	DISPOSAL SITE	
INFORMATION	FLOW METER & RECORDER	U Estimated.
	RECORDS	S
	SAMPLING PROCEDURES	S
	ANALYSES PERFORMED BY	S
		Grabs at outfall by Airtron personnel. Preserved.
		↳ Townley Research + Consulting
OTHER	FINAL EFFLUENT APPEARANCE	S Clear at outfall. Some turbidity further down drainage ditch
	REC. WATERS APPEARANCE	NI

Monitoring Information

NS0025739- Litton Inds - Airtron Division

Source - April 1989 DMR

<u>Parameter</u>	<u>Limits</u>	<u>Reported Values</u>	
	<u>#001</u>	<u>Kgd</u>	<u>concentration</u>
Temperature	30 °C max	—	max 20.6 °C
pH	6.0 - 9.0 su	6.0 - 7.4	7.4 - 7.7 su
TSS	0.9 / 1.8 kgd	.0512 / .0636	2.2 / 2.4
Oil + Grease	10 / 15 mg/l	—	4.8 / 6.0 mg/l
Cyanide	.02 / .04 kgd	.000 / .000	0.0 / 0.0 mg/l
Fluoride	.07 / .12 kgd	.0063 / .0093	Not reported
Arsenic	.003 / .008 kgd	.0017 / .0034	Not reported
Cadmium	.012 / .031 kgd	.000 / .000	1.0 / 2.0 mg/l
Chromium	.02 / .04 kgd	.0002 / .0003	6.0 / 12.0 mg/l
Copper	.02 / .04 kgd	.0008 / .0015	29.0 / 56.0 mg/l
Lead	.02 / .03 kgd	.000 / .000	.000 / .000 mg/l
Nickel	.02 / .04 kgd	.0008 / .0015	.03 / .056 mg/l
Silver	.002 / .004 kgd	.0001 / .0002	.003 / .006 mg/l
Zinc	.02 / .04 kgd	.0001 / .0001	.003 / .004 mg/l
Flow	No limit.	30 day ave - .00606 mg	
Total Toxic Organics	2.08 mg/l max	<u>C/O</u>	0 / 0 mg/l
VO5624	100 mg/l max	—	28.355 / 53.27 mg/l
Acute Toxicity	LC50 ≥ 50%		

Note: Cd, Cu, Cr concentrations are ppb. Pb, Ni, Ag, Zn, CN are ppm.

Continued:

#002

<u>Parameter</u>	<u>Limits</u>	<u>Concentrations</u>
COD	100 mg/l max	17.0 / 17.0 mg/l
TSS	50 mg/l max	2.8 / 2.8 mg/l
pH.	6.0 - 9.0 su	7.7 - 8.1 su
Oil + Grease	15 mg/l max	2.0 / 2.0 mg/l
Flow	No limit	.0012 mgd ave

Reported effluent violations since 7-88
(1 calendar year):

July 1988 #001 VO-624 131 mg/l

Reported effluent limit violations since
10-23-87 (last inspection):

#001

VO-624

Nov 87

Dec 87

Jan 88

Feb 88

March 88

Airtron - PLOT PLAN & FLOW SCHEME

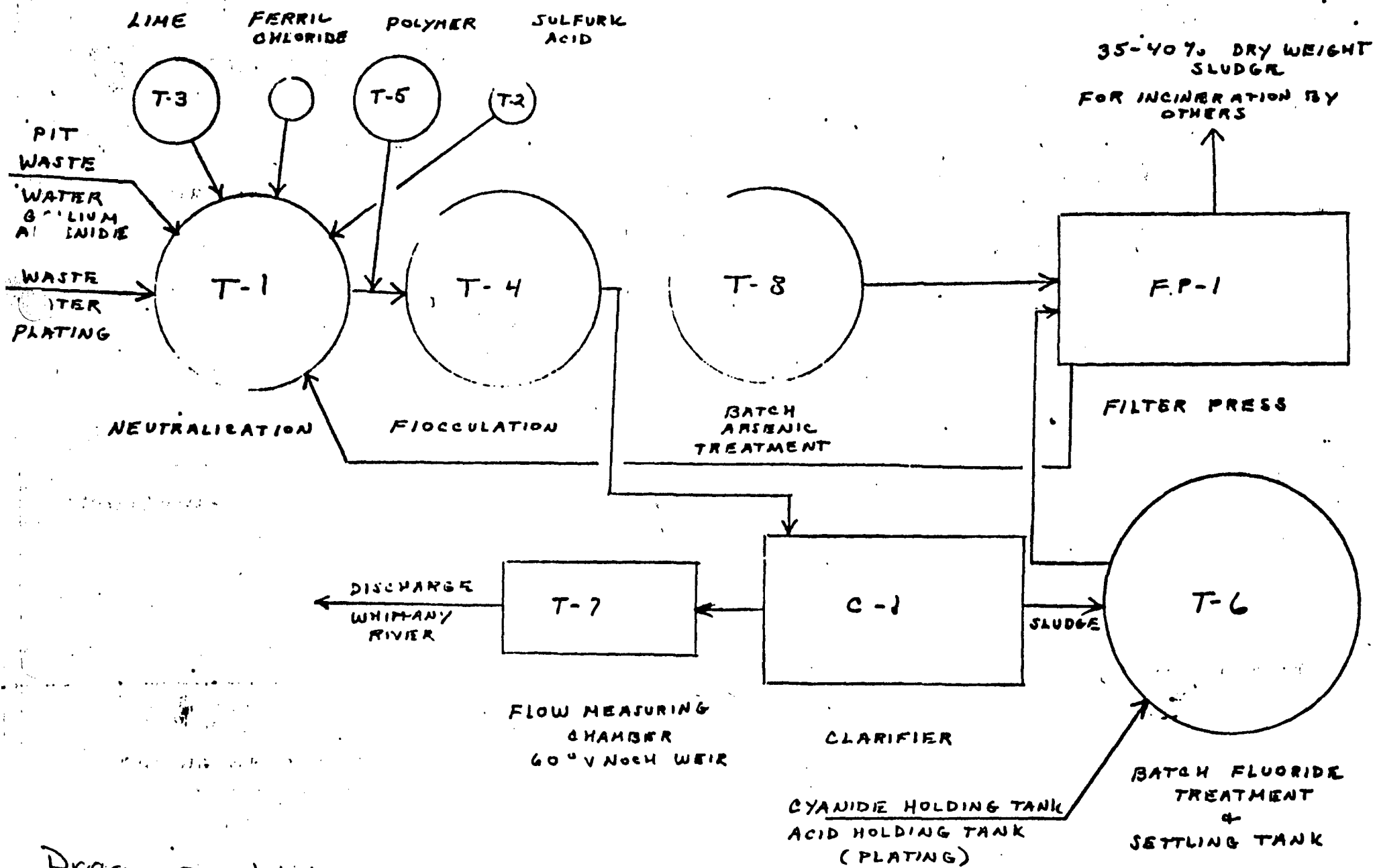
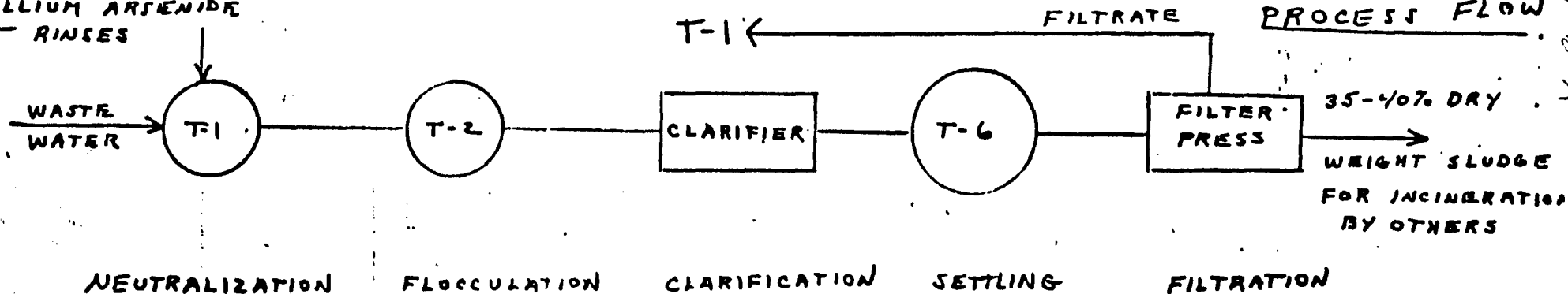


Diagram provided
by Airtron 7-89

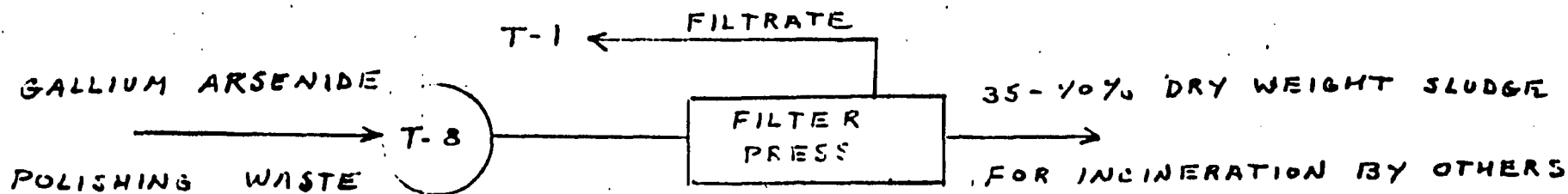
PLATING ROOM +
GALLIUM ARSENIDE
PIT RINSES

RINSE WATER TREATMENT

Airtron
PROCESS FLOW



ARSENIC BATCH TREATMENT



FLUORIDE BATCH TREATMENT

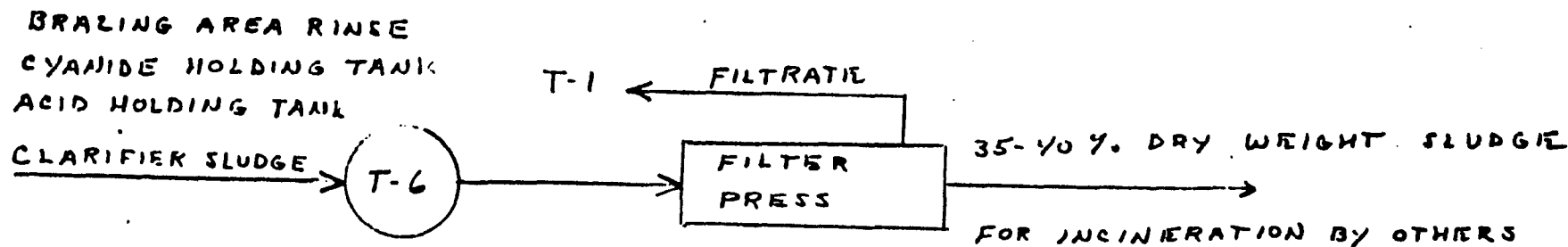
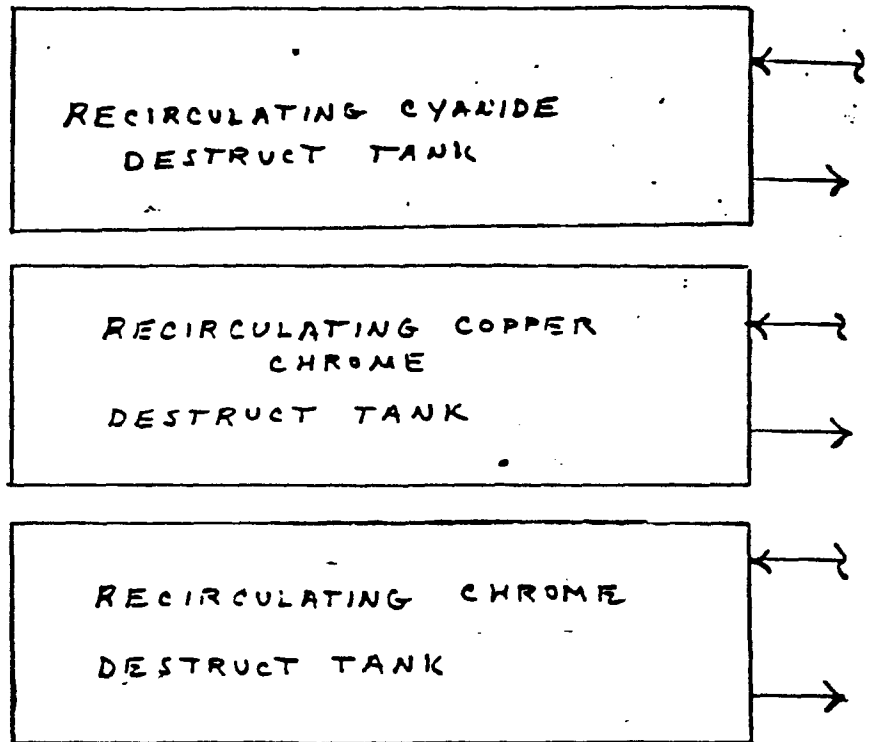


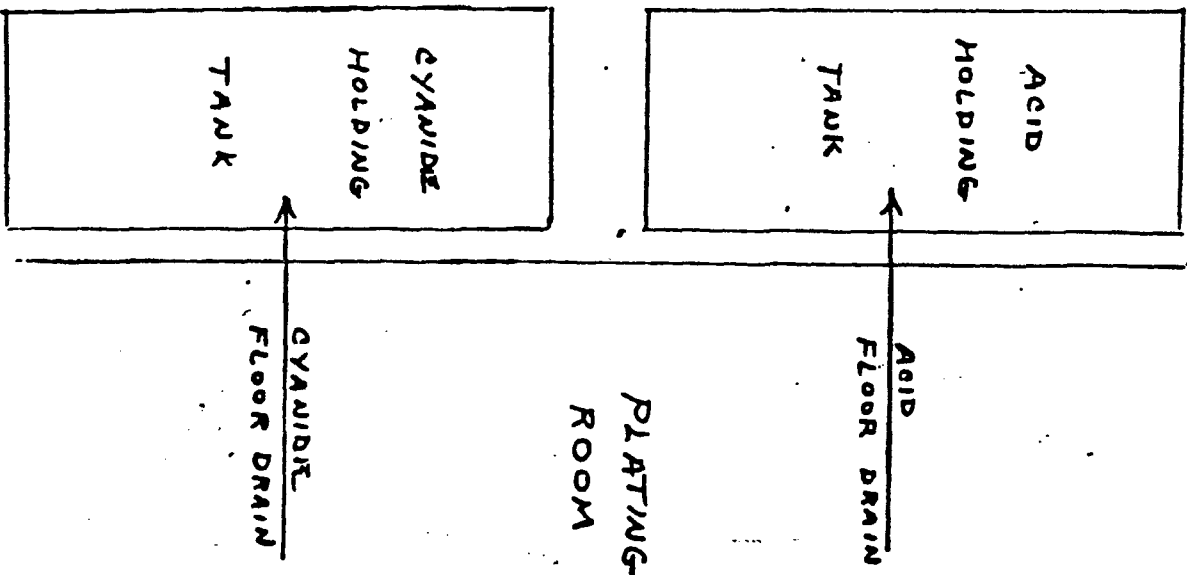
Diagram
provided by
Airtron
7/89

PLATING ROOM



PLATING ROOM

TREATMENT TANKS



PLATING
ROOM

Diagram
provided by
Airtrend 7/89

Form ADM-015
8/86:mlb

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Date: 11-21-89

TO

Nicholas J. Nitti
Environmental &
Safety Compliance
Engineer
Litton Industries -
Airtron Division

FROM

LISA TRACY
Northern Bureau of Regional
Enforcement, Div. of Wtr. Res.
1259 Route 46 - Building 2
Parsippany, NJ 07054
Phone No.: 201-299-7592

For Your:

ACTION
COMMENTS

APPROVAL
SIGNATURE

INFO
FILE

REVIEW
OTHER

FURTHER COMMENTS:

Enclosed are analytical results for grab samples taken by NJDEP on May 11, 1989. Abbreviations in the data package are: MDL - minimum detection limit, k - less than, ND - not detected at the MDL used. Any questions, please call. ^{K-11}

AQUEOUS SAMPLE ANALYSIS REQUEST

Lab Sample Number _____

☒ Routine (1) ☐ Priority (2) ☐ Emergency (1)

SAMPLE INFORMATION

Sampling Point/Station Identification Number: **001**
Collection Date (MM/DD/YY): **5/11/89**
Collection Time (Military): **9:40 AM**
Field Sample Number: **51840**

Sampling Site/Facility/Supply/Location: **Anderson, Morris Plains, NJ**
Stream: **Whispering River**
Municipality: **Morris Plains**
County: **Morris**

Sample Type:
☐ Stream/Surface
☐ Sewage
☒ Industrial
☐ Ground Water
☐ Potable-Raw
☐ Potable-Finished
☐ Private Well
☐ Ocean/Seine
☐ Other _____

Chain of Custody: ☒ Yes ☐ No
Data Package: ☒ Tier II ☐ Tier I
Retain Sample: ☐ Yes ☒ No

AGENCY INFORMATION

Submitting Agency: **NJ DEP-DNR-IVBRE**
Sample Collector: **J. Churley**
Street Address: **1259 RT 46, Bldg #2**
DEP Agency No.: **222**
DEP Project Code: **CG 4M**
City, State, Zip Code: **Parsippany, NJ 07054**
Comments: _____

Field Information

Water Temp °C (P00010): **16°**
Do-Winkler (P00300): _____
Do-Probe (P00299): _____
pH (Field) (P00400): **6.7**
Sample Depth Ft. (P00003): _____
Stream Flow-CFS (P00061): _____
Gage Height-Ft. (P00065): _____
Spec. Cond. @ 25°C (P00095): _____
Salinity (P00480): _____
Tide Stage (P70211): _____

ANALYSIS REQUESTS

BACTERIOLOGY

Bact. Lab. Sample No. _____
Date Received _____
☐ Fecal Coli (MPN) ☐ Tot. Coli (MPN)
☐ Fecal Coli (MF) ☐ Tot. Coli (MF)
☐ Fecal Streptococci (MPN)

DILUTIONS REQUESTED

Fecal Coli	10	1	-1	-2	-3	-4	-5	-6
Total Coli	10	1	10	10	10	10	10	10
Fecal Strep.	10	1	10	10	10	10	10	10

NUTRIENTS

☐ NO₂-N (NAN02N)
☐ NO₂ + NO₃-N (NAN03N)
☐ NH₃-N (NANH3N)
☐ TKN (NATKN)
☐ ORTHO-P (NAOP)
☐ TOTAL-P (NATP)

DEMANDS

☐ COD (COD)
☐ TOC (DATOC)
☐ BOD₅ (BOD5)
☐ CBOD₅ (CBOD5)
☐ BOD₂₀ (BOD2)
☐ CBOD₂₀ (CBOD2)

BOD DILUTIONS REQUESTED

BOD ₅				
CBOD ₅				
BOD ₂₀				
CBOD ₂₀				

RESIDUES

☒ Non-Filterable Residue (RASS)
☐ Total Residue (RATS)
☐ Filterable Residue (RATDS)
☐ Non-Filterable Volatile Residue (RAVSS)
☐ Total Volatile Residue (RAVTS)
☐ Filterable Volatile Residue (RAVDS)
☐ Settleable Matter (RASM)

GENERAL

☐ Color (GAC)
☐ Odor (GAO)
☐ Turbidity (GAT)
☐ PH (GAPH)
☐ Alkalinity (GAALK)
☐ Acidity (GAACID)
☐ Chloride (GACL)
☐ MBAS (GAMBAS)
☐ Phenols (SSI)
☐ Phenols (PW)
☐ Hardness (GARHARD)
☐ Sulfate (GASO4)
☐ Oil & Grease (GAOG)
☐ Petroleum (GAPHIC)
☐ Hydrocarbons (GACH)
☒ Cyanide (GACN)
☐ Conductance (GACOND)
☐ Dissolved Oxy. (GADO)
☒ Fluoride (GAF)
☒ Fluoride w/Dis. (GAFO)
☐ Silica (GASI)
☐ Sulfide (GAS)

METALS

☒ Ag (MAAG)
☐ Al (MAAL)
☒ As (MBAS)
☐ Ba (MABA)
☐ Be (MABE)
☐ Ca (MACA)
☐ Cd (MACD)
☐ Cr-M (MACRM)
☐ Cr-T (MACR)
☐ Co (MACO)
☐ Cu (MACU)
☐ Fe (MAFE)
☐ Hg (MAHG)
☐ K (MAK)
☐ Mg (MAMG)
☐ Mn (MAMN)
☐ Na (MANA)
☐ Ni (MANI)
☐ Pb (MAPB)
☐ Sb (MBSB)
☐ Se (MBSF)
☐ Sn (MBSN)
☐ Ti (MBTI)
☐ Tl (MBTL)
☐ Zn (MAZN)

ORGANICS

☐ EPA 601 (V0601)
☐ EPA 602 (V0602)
☐ EPA 612 (V0612)*
☐ EPA 624 (V0624)*
☐ EPA 625 (V0625)
☐ EPA 625 Base Neut. only (M625B)
☐ EPA 625 Acids only (M625A)
☐ EPA 503.1 (V0503)*
☐ PEST 1 Organochlorines and PCB's*
☐ PEST 2 Organophosphates
☐ PEST 3 Herbicides
☐ PEST 4 Drinking Water
☐ PCB's Only

OTHER

☐ _____
☐ _____
☐ _____
☐ _____
☐ _____
☐ _____
☐ _____
☐ _____
☐ _____
☐ _____

ANALYSIS REQUESTED
LABORATORY

5-12

AQUEOUS GENERAL CHEMISTRY RESULTS

Lab. Sample No.

51840

Analysis (1)	Sample Result	Method Blank	MDL	Analysis (1)	Sample Result	Method Blank	MDL
Nitrite Nitrogen (P00615)			0.003	Color in Platinum - Cobalt Units (P00080)			5
Nitrite & Nitrate Nitrogen (P00630)			0.05	Odor			1
Ammonia Nitrogen (P00610)			0.05	Turbidity in NTU (P00067)			0.1
Total Kjeldahl Nitrogen (P00625)			0.05	pH in pH Units (P00403)			—
Ortho Phosphorus (P70507)			0.01	Alkalinity (P00410)			1
Total Phosphorus (P00665)			0.02	Acidity (P00436)			1
Non-Filterable Residue (P00530)	5		2	Chloride (P00940)			0.5
Total Residue (P00500)			2	MBAS (P38260)			0.1
Filterable Residue (P70300)			2	Phenols (SSI) (P32730)			0.05
Non-Filterable Volatile Residue (P00535)			2	Phenols (pw) (P32730)			0.005
Total Volatile Residue (P00505)			2	Hardness (P00900)			2
Filterable Volatile Residue (P00520)			2	Sulfate (P00945)			1
Settleable Matter in ml/l/hr (P50086)			0.2	Oil & Grease (P00556)			5
COD - std (P00340)			50	Petroleum Hydrocarbons (P45510)			1
COD - Low (P00335)			5	Cyanide (P00720)	0.001K		0.001
COD - High Chloride (P00340)			250	Conductance in umhos (P00095)			0.1
TOC (P00680)			0.1	Dissolved Oxygen (P00300)			0.2
				Fluoride (P00951)			0.1
				Fluoride with distillation (P00951)	0.21		0.1
				Sulfide (P00745)			1
				NOTE: Sample results, method blank results and MDL's are expressed in parts per million (ppm), unless otherwise specified.			
				REPORT SUBMITTED			
				JUN 10			

Analysis (1)	Sample Result	Dilutions				MDL
BOD ₅ (P00310)		% Conc.				
		+ / -				
CBOD ₅		% Conc.				
		+ / -				
BOD ₂₀		% Conc.				
		+ / -				
CBOD ₂₀		% Conc.				
		+ / -				

Name of Supervisor - Print

Signature

Date
CHEMISTRY LABORATORY

K-13

METAL ANALYSIS RESULTS

Laboratory Sample Number

51840

ANALYSIS	Sample Concentration (ppb)	Minimum Detection Level (ppb)	Method Blank Result (ppb)
Aluminum			
Antimony			
Arsenic	30		
Barium			
Beryllium			
Cadmium	3		
Calcium			
Chromium, Hexavalent			
Chromium, Total	17		
Cobalt			
Copper	145		
Iron			
Lead	5K		
Magnesium			
Manganese			
Mercury			
Nickel	288		
Potassium			
Selenium			
Silver	5K		
Sodium			
Thallium			
Titanium			
Tin			
Zinc	19		

REPORT SUBMITTED

JUN 16 1986

Supervisor (Print)

Signature

Date

NEW JERSEY STATE
DEPARTMENT OF HEALTH
PUBLIC HEALTH AND ENVIRONMENTAL LABORATORY

CHEM-14
MAY 86

DISTRIBUTION:

White - Sub Agency
Canary - Cont. File
Pink - Metals Lab

P8221

K-14

14414

Use one form
for each sample

REQUEST FOR ANALYSIS & CHAIN OF CUSTODY RECORD

SAMPLING LOCATION <i>Clinton, Clinton Creek</i>				
FIELD SAMPLE NO. <i>B 03761</i>	SAMPLE TYPE <i>Ind. - effluent (51840)</i>	PRESERVED <input checked="" type="checkbox"/>	COLLECTION DATE MO <i>5</i> DAY <i>11</i> YR <i>89</i>	TIME <i>9:40 AM</i>
RESPONSIBLE AGENCY <i>DWR - NBRE</i>	PERSON AUTHORIZED TO REQUEST ANALYSIS <i>Ron Rossi</i>		PHONE NO. <i>2-0127</i>	
SEND RESULTS TO: <i>J. Unzueta</i>	NAME & ADDRESS OF UNIT <i>DWR - NBRE, 1255 Rt 46, Bldg #2, Parsippany, NJ 07054</i>			
SAMPLES WILL BE DISCARDED AFTER ANALYSIS UNLESS NOTED BELOW.				
REMARKS <i>222/CGM</i>			ACCOUNT NO. -----	

ANALYSES TO BE PERFORMED

I. Organics

- ☐ A. Halogenated and Aromatic Volatiles
☐ B. Volatiles
☐ C. Trihalomethanes
☐ D. Pesticides/PCB's
☐ E. PCB's
☐ F. Bili 280 ☐ Volatiles ☐ Chlordane & PCB's
☐ G. Base-Neutral/Acid Extractables
☐ H. Pesticides, Drinking Water
☐ I. Herbicides, Drinking Water

III. Limited Chemistry

- ☐ A. Total Cyanide ☒ C. Oil and Grease
☐ B. Total Phenol ☐ D. pH

II. Inorganics

- ☐ A. Metals, Drinking Water ☐ Primary ☐ Secondary
☐ B. Metals, Priority Pollutant
☐ C. Metals Scan (ICP)
☐ D. Metals, Water Pollution, specify: _____

IV. RCRA

- ☐ A. EP Toxicity ☐ Metals ☐ Pesticides ☐ Herbicides
☐ B. Ignitibility
☐ C. Corrosivity ☐ pH ☐ Coupon
☐ D. Reactivity

V. Other (Specify)

Number of Containers	Size of Containers	Batch No. of Containers	DESCRIPTION OF SAMPLE	LAB USE ONLY PRICE LIST
<i>2</i>	<i>950ml</i>	<i>112487</i>		<input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D <input type="checkbox"/> E <input type="checkbox"/> F <input type="checkbox"/> Other _____ (hours)

RELINQUISHED BY	RECEIVED BY	DATE	TIME	REASON FOR CHANGE OF CUSTODY
<i>Allyn</i>	<i>Lois Landwehr</i>	<i>4/29/88</i>	<i>1420</i>	<i>Bottle Pickup</i>
<i>Ray Johnson</i>	<i>T. Cimino</i>	<i>5/2/88</i>	<i>8910</i>	<i>Bottle Transfer</i>
<i>T.V. Cimino</i>	<i>J. Unzueta</i>	<i>5/10/89</i>	<i>10:00</i>	<i>" "</i>
<i>J. Unzueta</i>	<i>Mark Tammill</i>	<i>5/11/89</i>	<i>1330</i>	<i>Transfer to DEQAS</i>
<i>L. E. DWR</i>	<i>Helen Kingle</i>	<i>5/15/89</i>	<i>1110</i>	<i>Sample prep</i>

COPIES:

Gold - Sample Receipt

Pink - Lab

Yellow - Client

White - BEL

PAGE

K-15

**NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL LABORATORIES**

QUANTITATIVE RESULTS & QUALITY ASSURANCE DATA

MISCELLANEOUS PARAMETERS

LAB. CONTROL #: 17914

SAMPLE TYPE: Handwritten

FIELD SAMPLE #: 003701

ANALYTICAL METHOD: Gravimetric

REPORT DATE: July 20 1987

EXTRACTION DATE: May 16, 1989

SECTION SUPERVISOR: Allen Kinsale

LAB. SUPERVISOR: *[Signature]* 5/30/84

**CHECK
APPROPRIATE
CATEGORY**

<input type="checkbox"/> AIR		$\mu\text{g}/\text{m}^3$
<input type="checkbox"/> SWAB	$\mu\text{g}/\text{cm}^2$	$\mu\text{g}/\text{in.}^2$
<input type="checkbox"/> SOIL		$\mu\text{g}/\text{g}$

☒ OTHER

[illegible]

ND = Not Detected

NA = Not Applicable

Lab Sample Number

☒ Routine (3) ☐ Priority (2) ☐ Emergency (1)

SAMPLE INFORMATION

Sampling Point/Station Identification Number NJ 0025739 002	Collection Date (MM/DD/YY) 5/11/89	Collection Time (Military) 9:50AM	Field Sample Number 51841
Sampling Site/Facility/Supply/Location Anderson, Morris Plains, N.J. Stream Whispering River Municipality Morris Plains County Morris	Sample Type <input type="checkbox"/> Stream/Surface <input type="checkbox"/> Sewage <input type="checkbox"/> Raw <input type="checkbox"/> Effluent <input checked="" type="checkbox"/> Industrial <input type="checkbox"/> Raw <input checked="" type="checkbox"/> Effluent <input type="checkbox"/> Ground Water <input type="checkbox"/> Potable-Raw <input type="checkbox"/> Potable-Finished <input type="checkbox"/> Private Well <input type="checkbox"/> Ocean/Saline <input type="checkbox"/> Other		Chain of Custody <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Data Package <input checked="" type="checkbox"/> Tier II <input type="checkbox"/> Tier I Retain Sample <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

AGENCY INFORMATION

Submitting Agency NJ DEP - DWR - HABRE		Sample Collector J. Chumbley																							
Street Address 1259 Rt 46, Bldg #2		DEP Agency No. 222	DEP Project Code C64M																						
City, State, Zip Code Passypany NJ 07054																									
Comments Stormwater		<table border="1"> <thead> <tr> <th colspan="2">Field Information</th> </tr> </thead> <tbody> <tr> <td>Water Temp °C (P00010)</td> <td>10°</td> </tr> <tr> <td>Do-Winkler (P00300)</td> <td></td> </tr> <tr> <td>Do-Probe (P00299)</td> <td></td> </tr> <tr> <td>pH (Field) (P00400)</td> <td>6.7</td> </tr> <tr> <td>Sample Depth Ft. (P00003)</td> <td></td> </tr> <tr> <td>Stream Flow CFS (P00061)</td> <td></td> </tr> <tr> <td>Gage Height-Ft. (P00065)</td> <td></td> </tr> <tr> <td>Spec. Cond. @ 25 °C (P00095)</td> <td></td> </tr> <tr> <td>Salinity (P00480)</td> <td></td> </tr> <tr> <td>Tide Stage (P70211)</td> <td></td> </tr> </tbody> </table>		Field Information		Water Temp °C (P00010)	10°	Do-Winkler (P00300)		Do-Probe (P00299)		pH (Field) (P00400)	6.7	Sample Depth Ft. (P00003)		Stream Flow CFS (P00061)		Gage Height-Ft. (P00065)		Spec. Cond. @ 25 °C (P00095)		Salinity (P00480)		Tide Stage (P70211)	
Field Information																									
Water Temp °C (P00010)	10°																								
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Gage Height-Ft. (P00065)																									
Spec. Cond. @ 25 °C (P00095)																									
Salinity (P00480)																									
Tide Stage (P70211)																									

ANALYSIS REQUESTS

BACTERIOLOGY

Bact. Lab. Sample No. _____

Date Received _____

☐ Fecal Coli (MPN)

☐ Fecal Coli (MF)

☐ Fecal Streptococci (MPN)

☐ Tot. Coli (MPN)

☐ Tot. Coli (MF)

DILUTIONS REQUESTED

Fecal Coli			-1	-2	-3	-4	-5	-6
Total Coli	10	1	10	10	10	10	10	10
Fecal Strep.	10	1	10	10	10	10	10	10

NUTRIENTS

☐ NO₂-N (NAN02N)

☐ NO₂ + NO₃-N (NAN03N)

☐ NH₃-N (NANH3N)

☐ TKN (NATKN)

☐ ORTHO-P (NAOP)

☐ TOTAL-P (NATP)

DEMANDS

☒ COD (COD)

☐ TOC (DATOC)

☐ BOD₅ (BOD5)

☐ CBOD₅ (CBOD5)

☐ BOD₂₀ (BOD2)

☐ CBOD₂₀ (CBOD2)

BOD DILUTIONS REQUESTED

BOD ₅			
CBOD ₅			
BOD ₂₀			
CBOD ₂₀			

RESIDUES

☒ Non-Filterable Residue (RASS)

☐ Total Residue (RATS)

☐ Filterable Residue (RATDS)

☐ Non-Filterable Volatile Residue (RAVSS)

☐ Total Volatile Residue (RAVTS)

☐ Filterable Volatile Residue (RAVDS)

☐ Settable Matter (RASM)

GENERAL

☐ Color (GAC)

☐ Odor (GAO)

☐ Turbidity (GAT)

☐ PH (GAPH)

☐ Alkalinity (GAALK)

☐ Acidity (GAACID)

☒ Chloride (GACL)

☐ MBAS (GAMBAS)

☐ Phenols (SS)

☐ Phenols (PW)

☐ Hardness (GARHARD)

☐ Sulfate (GASO4)

☐ Oil & Grease (GAOG)

☐ Petroleum (GAPHQ)

☐ Hydrocarbons

☐ Cyanide (GACN)

☐ Conductance (GACOND)

☐ Dissolved Oxy. (GADO)

☐ Fluoride (GAF)

☐ Fluoride w/Dist. (GAFD)

☐ Silica (GAS)

☐ Sulfide (GAS)

METALS

☐ Ag (MAAG)

☐ Al (MAAL)

☐ As (MBAS)

☐ Ba (MABA)

☐ Be (MABE)

☐ Ca (MACA)

☐ Cd (MACD)

☐ Cr-H (MACRH)

☐ Cr-T (MACR)

☐ Co (MACO)

☐ Cu (MACU)

☐ Fe (MAFE)

☐ Hg (MAHG)

☐ K (MAK)

☐ Mg (MAMG)

☐ Mn (MAMN)

☐ Na (MANA)

☐ Ni (MANI)

☐ Pb (MAPB)

☐ Sb (MBSB)

☐ Se (MBSE)

☐ Sn (MBSN)

☐ Ti (MBTD)

☐ Tl (MBTL)

☐ Zn (MAZN)

ORGANICS

☐ EPA 601 (VO601)

☐ EPA 602 (VO602)

☐ EPA 612 (VO612)*

☐ EPA 624 (VO624)*

☐ EPA 625 (VO625)

☐ EPA 625 Base Neut. only (M625B)

☐ EPA 625 Acids only (M625A)

☐ EPA 503.1 (VO503)*

☐ PEST 1 Organochlorines and PCB's*

☐ PEST 2 Organophosphates

☐ PEST 3 Herbicides

☐ PEST 4 Drinking Water

☐ PCB's Only

OTHER

☐ _____

☐ _____

☐ _____

☐ _____

☐ _____

☐ _____

☐ _____

☐ _____

☐ _____

☐ _____

A280 Analysis

DATE: _____

LABORATORY: _____

AQUEOUS GENERAL CHEMISTRY RESULTS

Lab. Sample No.

51841

Analysis (1)	Sample Result	Method Blank	MDL	Analysis (1)	Sample Result	Method Blank	MDL
Nitrite Nitrogen (P00615)			0.003	Color in Platinum - Cobalt Units (P00080)			5
Nitrite & Nitrate Nitrogen (P00630)			0.05	Odor			1
Ammonia Nitrogen (P00610)			0.05	Turbidity in NTU (P00067)			0.1
Total Kjeldahl Nitrogen (P00625)			0.05	pH in pH Units (P00403)			—
Ortho Phosphorus (P70507)			0.01	Alkalinity (P00410)			1
Total Phosphorus (P00665)			0.02	Acidity (P00436)			1
Non-Filterable Residue (P00530)	3		2	Chloride (P00940)	12.5		0.5
Total Residue (P00500)			2	MBAS (P38260)			0.1
Filterable Residue (P70300)			2	Phenols (SSI) (P32730)			0.05
Non-Filterable Volatile Residue (P00535)			2	Phenols (pw) (P32730)			0.005
Total Volatile Residue (P00505)			2	Hardness (P00900)			2
Filterable Volatile Residue (P00520)			2	Sulfate (P00945)			1
Settleable Matter in ml/l/hr (P50086)			0.2	Oil & Grease (P00556)			5
COD - std (P00340)			50	Petroleum Hydrocarbons (P45510)			1
COD - Low (P00335)	5K		5	Cyanide (P00720)			0.001
COD - High Chloride (P00340)			250	Conductance in umhos (P00095)			0.1
TOC (P00680)			0.1	Dissolved Oxygen (P00300)			0.2
				Fluoride (P00951)			0.1
				Fluoride with distillation (P00951)			0.1
				Silica (P00955)			2
				Sulfide (P00745)			1

Analysis (1)	Sample Result	Dilutions				MDL
BOD ₅ (P00310)		% Conc.				
		+ / -				
CBOD ₅		% Conc.				
		+ / -				
BOD ₂₀		% Conc.				
		+ / -				
CBOD ₂₀		% Conc.				
		+ / -				

NOTE: Sample results, method blank results and MDL's are expressed in parts per million (ppm), unless otherwise specified.

JUN 16 1988

LABORATORY SEAL

Name of Supervisor - Print	Signature	Date
----------------------------	-----------	------

Use one form
for each sample

REQUEST FOR ANALYSIS & CHAIN OF CUSTODY RECORD 2

14413

SAMPLING LOCATION <i>Ainton, Linton Ind.</i>				
FIELD SAMPLE NO. <i>E03760</i>	SAMPLE TYPE <i>Ind. - effluent (51841)</i>	PRESERVED <input checked="" type="checkbox"/>	COLLECTION DATE MO <i>05</i> DAY <i>11</i> YEAR <i>89</i>	TIME <i>9:50</i>
RESPONSIBLE AGENCY <i>DWR - NBRE</i>		PERSON AUTHORIZED TO REQUEST ANALYSIS <i>Ron Rossi</i>		PHONE NO. <i>2-0427</i>
SEND RESULTS TO: <i>J. Christensen</i>		NAME & ADDRESS OF UNIT <i>DWR - NBRE, 1259 Rt 46, Bldg #2, Passyunk, N.J. 07054</i>		
SAMPLES WILL BE DISCARDED AFTER ANALYSIS UNLESS NOTED BELOW.				
REMARKS <i>222' C6UM</i>				ACCOUNT NO. -----

ANALYSES TO BE PERFORMED

I. Organics

- ☐ A. Halogenated and Aromatic Volatiles
☐ B. Volatiles
☐ C. Trihalomethanes
☐ D. Pesticides/PCB's
☐ E. PCB's
☐ F. Bill 280 ☐ Volatiles ☐ Chlordane & PCB's
☐ G. Base-Neutral/Acid Extractables
☐ H. Pesticides, Drinking Water
☐ I. Herbicides, Drinking Water

II. Inorganics

- ☐ A. Metals, Drinking Water ☐ Primary ☐ Secondary
☐ B. Metals, Priority Pollutant
☐ C. Metals Scan (ICP)
☐ D. Metals, Water Pollution, specify: _____

IV. RCRA

- ☐ A. EP Toxicity ☐ Metals ☐ Pesticides ☐ Herbicides
☐ B. Ignitibility
☐ C. Corrosivity ☐ pH ☐ Coupon
☐ D. Reactivity

V. Other (Specify)

III. Limited Chemistry

- ☐ A. Total Cyanide ☒ C. Oil and Grease
☐ B. Total Phenol ☐ D. pH

Number of Containers	Size of Containers	Batch No. of Containers	DESCRIPTION OF SAMPLE	LAB USE ONLY PRICE LIST
2	950ml	112487	Oil & Grease - Ind. effluent (51841)	<input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D <input type="checkbox"/> E <input type="checkbox"/> F <input type="checkbox"/> Other _____ (hours)

RELINQUISHED BY	RECEIVED BY	DATE	TIME	REASON FOR CHANGE OF CUSTODY
<i>Anthony...</i>	<i>Manuel...</i>	5/2/88	14:00	Bottle Breakage
<i>Ron...</i>	<i>T. C...</i>	5/2/89	09:15	Bottle Transfer
<i>T. C...</i>	<i>J. Christensen</i>	5/11/89	10:00	" "
<i>J. Christensen</i>	<i>Mark...</i>	5/11/89	1330	Transfer to DEQA
<i>L. B. M...</i>	<i>Niles...</i>	5/15/89	1110	Sample prep

COPIES:

Gold - Sample Receipt

Pink - Lab

Yellow - Client

White - BEL

PAGE _____

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NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL LABORATORIES

QUANTITATIVE RESULTS & QUALITY ASSURANCE DATA

MISCELLANEOUS PARAMETERS

LAB. CONTROL #:

SAMPLE TYPE:

FIELD SAMPLE #5

ANALYTICAL METHOD:

REPORT DATE:

EXTRACTION DATE:

SECTION SUPERVISOR:

LAB. SUPERVISOR:

**CHECK
APPROPRIATE
CATEGORY**

☐ AIR $\mu\text{g}/\text{m}^3$ ☐ SWAB $\mu\text{g}/\text{cm}^2$ $\mu\text{g/in.}^2$ ☐ SOIL

μg/g

☒ OTHER

angle

[illegible]

ND - Not Detected

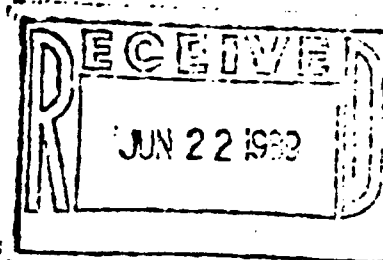
NA = Not Applicable

CHAIN OF CUSTODY RECORD

NAME OF UNIT AND ADDRESS:

NAME OF UNIT AND ADDRESS:
NJ DEP - DWR - NBRE, 1259 Rt 46, Bldg #2, Parsippany, N.J. 07054

SAMPLE NUMBER	Number of Containers	DESCRIPTION OF SAMPLES
51840	8	TSS (200); Pb-Cd (1ℓ); F (500); Ni-Cu-T (1ℓ); Cu-Zn (1ℓ); As-Ag (1ℓ); CN (1ℓ); CN (duplicate) (1ℓ).
51841	3	TSS (200); COD (500); Chloride (200).



PERSON ASSUMING RESPONSIBILITY FOR SAMPLE:

TIME	DATE
------	------

TIME	DATE
11:55 am	5/11/89

SAMPLE NUMBER	RELINQUISHED BY:	RECEIVED BY:	TIME	DATE	REASON FOR CHANGE OF CUSTODY
51840-1	J. Christakis	S. Pullar	12N	5/11/89	Transport DOH/Chem
51840-41	W. C. C. C.	M. Exantus	925	5-15-89	SS
51840	W. C. C. C.	A. De Lotto	930	5-15-89	CN
51840	W. C. C. C.	M. Exantus	925	5/16/89	F
51841	J. Delaney	V. Arvey/M. C. M.	1220	5/16/89	Chloride
51840	R. B. B.	M. P. P.	10:00	5/17	Cr Cu Zn
51840	L. R. R.	M. R. R.	2:00	5/17	CH
51840	J. Delaney	Chief Hargrave	1010	5/23/89	Ag
51840	W. C. C. C.	M. Exantus	950	5-31-89	Ag
51841	W. C. C. C.	A. De Lotto	930	6-1-89	COB
					RECEIVED
					JUN 10
					RECEIVED
					RECEIVED



New Jersey Pollutant Discharge Elimination System

The New Jersey Department of Environmental Protection hereby restricts and controls the discharge of pollutants to waters of the State from the subject facility/activity in accordance with applicable laws and regulations. The permittee is responsible for complying with all terms and conditions of this authorization and agrees to said terms and conditions, including requirements for the construction, installation, modification or operation of any equipment to collect, treatment or discharge of any pollutant to waters of the State.

PERMIT NUMBER NJ0025739

Permittee

AIRTRON DIVISION-LITTON INDUST
200 EAST HANOVER AVE
MORRIS PLAINS, NJ 07950

Co-Permittee

Property Owner

LITTON INDUSTRIES
200 EAST HANOVER AVE
MORRIS PLAINS, NJ 07950

Location of Activity

LITTON INDUSTRIES INC AIRTRON
200 EAST HANOVER AVE
MORRIS PLAINS, NJ 07950

Type of Permit Covered By This Approval	Issuance Date	Effective Date	Expiration Date
B :Ind/Comm.SW Discharge	3/15/85	5/01/85	4/30/90
I :Infilt/Perc. Lagoon - Ind.	10/01/89	11/01/89	4/30/94

The permittee shall comply with the attached General and Special Conditions.

By Authority of:
Eric J. Evenson
Acting Director
Division of Water Resources


DEP AUTHORIZATION
Arnold Schiffman
Assistant Director
Ground Water Quality Management

(Terms, conditions and provisions attached hereto)

State of New Jersey Department of Environmental Protection, Division of Water Resources

FACT SHEET

For NJPDES Permit to Discharge Into the Ground Waters of the State

NAME AND ADDRESS OF APPLICANT:

Litton Industries - Airtron Division
200 East Hanover Avenue
Morris Plains, NJ 07950-2496

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

Litton Industries - Airtron Division
200 East Hanover Avenue
Morris Plains, Morris County

RECEIVING WATER:

Ground waters of the state. The discharge has impacted the watertable aquifer in the unconsolidated glacial sediments beneath the site.

Hydrogeology

Surficial deposits at the Airtron site have been interpreted to be derived from a glacial delta of Wisconsinan age which is predominately composed of interbedded sands, gravels, silts and clays. These deposits maybe overlain by a discontinuous, poorly sorted, till. The glacial deposits range in thickness from a 100 feet to approximately 200 feet.

The glacial deposits overlie the Jurassic age Boonton Member of the Brunswick Formation. The Boonton Member is a highly fractured, red fissile mudstone with interbedded layers of siltstone, sandstone and conglomerate. The bedding in this area is generally flate lying with a dip slightly to the northwest. A layer of decomposed rock most likely exist between competent bedrock and the overlying glacial deposits.

Two aquifers in the unconsolidated deposits were encountered during investigations at the site. The water table in the shallow aquifer is encountered at depth ranging from approximately 40 to 60 feet below the surface. The saturated thickness of this aquifer ranges from 25 to 50 feet. Perched water tables have also been encountered. Perched water was noted on site in borings B-117 and 1M at depths of less than 10 feet. The deeper of the two aquifers is located at approximately 120 to 130 feet below ground surface and is confined. This has been determined as a aquitard indicating a upward leakage of ground water. Ground water flow direction is towards the southwest under the influence of a nearby production well. The ground water gradient has been reported to be 0.015 feet/foot and the calculated ground water flow velocity is approximately 0.50 feet/day.

DESCRIPTION OF FACILITY:

The Airtron facility manufactures electronic components and synthetic minerals. Airtron formerly disposed of the sludge from their processes in five unlined lagoons on site. The sludge from the lagoons was excavated and removed in 1980 in accordance with a Directive Order issued by the Division of Water Resources Northern Bureau of Regional Enforcement. Subsequently five shallow monitoring wells were installed to assess the potential for ground water contamination from the unlined lagoons. Contamination by volatile organic compounds used by Airtron was identified at levels significantly above NJPDES guidelines for such compounds in the ground water. Three shallow monitoring wells and three deep monitoring wells were installed to assist in the delineation of the ground water contamination. Additional monitoring wells are being required to determine the extent of ground water contamination.

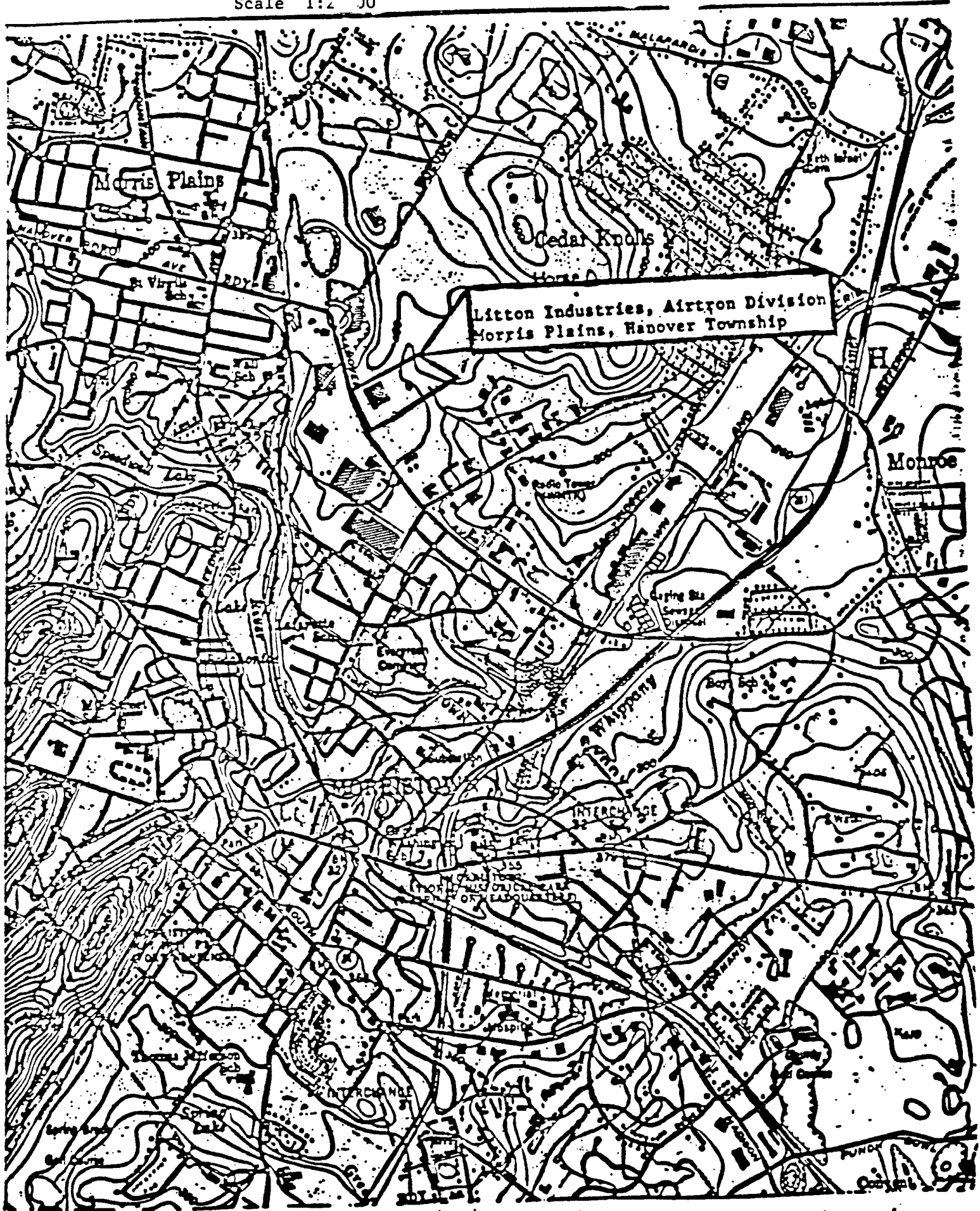
During a site inspection of the facility in September of 1988, it was brought to the attention of a representative of this Bureau the location of a underground (No. 4 fuel oil) storage tank used for heating. Further review of the facilities file revealed that an underground gasoline tank was located on the property in the vicinity of the fuel oil tank (see attachment III).

DESCRIPTION OF DISCHARGE:

The discharge at the facility is due to leachate from the five former unlined sludge lagoons to the unconsolidated water table aquifer. Ground water has been impacted and continues to be contaminated at the source.

PERMIT CONDITIONS:

The permittee must comply with the attached general and special conditions.



GROUND WATER MONITORING REQUIREMENTS AND STANDARDS

1. The permittee shall install seven (7) additional ground water monitor wells. The wells must be installed within 30 days of the Effective Date of the Permit. The wells must be installed by a licensed New Jersey well driller pursuant to N.J.S.A. 58:4A-6 and constructed according to the attached Department specifications (Attachment 1).
2. The locations of the new ground water monitoring wells and the required wells to be sampled are shown on Attachment 2. The permittee is responsible for locating and avoiding any subsurface utilities or other structures before well installation.
3. The permittee shall provide the Bureau of Ground Water Discharge Control a minimum of two weeks notification prior to the installation of any ground water monitor wells required by this permit.
4. The owner or operator shall inspect each ground water monitor well on a monthly basis for structural integrity and/or damage. The permittee shall maintain a complete inspection record indicating dates of inspection, inspector's name, and conditions observed. These records shall be made available to the Department upon request. Failure to maintain or submit records upon request shall be a violation of the conditions of this permit.
5. If the monitor wells are damaged or are otherwise rendered inadequate for their intended purpose, the Assistant Director, Ground Water Quality Management Element, shall be notified within five (5) days in writing indicating:
 - (a) Which wells were damaged or rendered inadequate for their intended use;
 - (b) The cause and extent of damage or the reason for the inadequacy;
 - (c) If the sampling schedule as required in this permit will be violated or if the results of the sampling may reasonably become misleading;
 - (d) The date that the well will again be operational. Damaged wells must be replaced or repaired within thirty (30) days after the damage has occurred. The wells must be sampled between the fourteenth day and the thirtieth day after they have been installed. A replacement well must meet the construction

requirements established by the Department. A valid New Jersey well permit is required prior to the installation of the replacement well;

(e) The next date that the well will be sampled.

Failure to follow these procedures is a violation of this permit and may subject the permittee to the provisions of N.J.S.A. 58:10A-10.

6. Satisfactory ground water wells are defined in N.J.A.C. 7:14A-6.13 of the NJPDES regulations and shall be subject to Departmental approval. If ground water monitoring wells do not meet these standards, they must be replaced with new wells meeting Departmental standards.
7. A Ground Water Monitor Well Certification (Forms A and B) shall be completed for each existing and proposed ground water monitor well within 30 days of the installation of the ground water monitor wells. Information for each well must be shown on a separate form.
8. For an existing well, if information required on the Ground Water Monitoring Certification (Forms A and B) cannot be determined or the ground water monitoring well is not adequately constructed to meet the requirements of this permit, the Department reserves the right to require the replacement of that well. Criteria to be used by the Department in judging the adequacy of a well will be related to the ability of the well to provide a representative ground water sample from the interval of the formation which the Department requires to be sampled. Any replacement well must be installed within a 10 foot radius of the existing well. Inadequate or damaged existing wells must be properly sealed pursuant to N.J.S.A. 58:4A-4.1. Instructions regarding sealing may be obtained by contacting the Bureau of Water Allocation at (609) 984-6831.
9. Within one-hundred and twenty (120) days of the Effective Date of Permit, the permittee shall identify to the Department the location of all ground water monitoring wells, piezometers, and supply wells on a plot plan drawn to a scale suitable to the Department.
10. Dedicated sampling equipment should be used, when sampling all the ground water monitor wells and the Mennen Production wells P-1 and P-2 located on the site map.
11. The permittee shall complete the forms required on the "Monitoring Report - Transmittal Sheet" (Form T-VWX-014) which are included as a part of this permit. Permittee must also sign and submit Form T-VWX-014. The signature on Form T-VWX-014 must be an original each time it is submitted.

Failure to submit sampling data on the forms required on the "Monitoring Report - Transmittal Sheet" shall be considered by the Department to be a violation of the permit sampling requirements and may place the permittee subject to civil and administrative penalties pursuant to N.J.S.A. 58:10A-10. It shall be the permittee's sole responsibility to maintain an adequate supply of the required report forms. All monitoring reports shall be sent to:

Department of Environmental Protection
Division of Water Resources
Management Services Element
Bureau of Information Systems
CN-029
Trenton, NJ 08625

ATTN: Monitoring Well Reports

12. All samples are to be analyzed by a New Jersey Certified Laboratory. The detection limits to be achieved for inorganic parameters and cyanide shall be less than the ground water quality standards.
13. The permittee shall sample all ground water monitoring wells shown on Attachment II, and any new wells as required by the special conditions of part IV of this permit, according to the following schedule: sampling shall commence in all monitoring wells shown in Attachment II within 60 days of the EDP. The sampling frequency of this permit shall be as follows:
 - a. Shallow and intermediate depth monitoring wells and Mennen Production wells P-1 and P-2 (see special condition section IV of this permit and attachment II) shall be sampled every 3 months.
 - b. Deep monitoring wells MW-201, MW-202, and MW-203 shall be sampled every 12 months.

All ground water elevations must be determined prior to evacuation and sampling of the wells. Permittee must develop a sampling plan in accordance with the methodology specified in N.J.A.C. 7:14A-6.12 of the NJPDES regulations and the latest edition of the Department's Field Procedures Manual for Water Data Acquisition and sample wells according to this plan. This sampling plan must include the use of trip blanks and field blanks and must be submitted within 30 days of the Effective Date of Permit.

Ground Water Monitoring Requirements

The permittee shall sample ground water using 40 CFR Part 136-Method 624 or Method 601 for the following volatile organic compounds:

Trichloroethylene
Tetrachloroethene
Trans-1,2-Dichloroethene
1,1-Dichloroethene
1,1,1-Trichloroethane

1. A grab sample type shall be taken for each well. "Grab" means an individual sample of appropriate volume collected after proper evacuation of the well and over a period not exceeding 15 minutes.
2. The permittee shall construct a table, following the example below, that lists the ground elevations, top of casing elevation, static water level, and ground water elevation for each well sited in attachment II.

Well Number	Ground Elevation	Top of Casing	Top of Screen	Depth to Water	Ground-Water Elevation

SPECIAL CONDITIONS/AIRTRON

1. Within 30 days of the Effective Date of the Permit (EDP) the permittee shall install 1 monitoring well MW-4 near the former lagoon (Attachment II) to monitor the "perched water" zone.
2. Within 30 days of the (EDP) the permittee shall install six (6) monitoring wells (MW-5 to MW-10), as shown in Attachment II, to monitor ground water above the "aquitard" and below the "perched zone" (the aquifer between 40 and 60 feet below land surface).
3. Within 120 days from the EDP, Airtron shall arrange to control the rate of pumping of Mennen well P-1 in order to maintain hydraulic control of the ground water contamination. However, if Mennen does not agree to give control of production well P-1 to Airtron, then Airtron must submit to the Department, within 180 days of the EDP, a plan to install and operate a recovery system that can be controlled. The initial start up of the recovery system shall be within 60 days after the approval of the plan by the Department. Such a system shall establish hydraulic control over the extent of ground water contamination from Airtron.
4. The permittee shall give the Hanover Health Department one weeks notice of any sampling or drilling activities on or off-site. The permittee shall also copy the Hanover Health Department on quarterly ground water monitoring data and the exposure assessment.
5. The Hanover Health Department shall be granted access to Airtron's property to check compliance with this permit in accordance with NJAC 7:14A-2.5(a)11.
6. The compliance points are all the monitoring wells (including new wells) shown in Attachment II and all additional monitoring wells installed under Special Condition 7 of this permit.

The Ground Water Protection Standards (GWPS) or concentration limits for this site are as follows:

Trichloroethylene	(TCE)	-----	1 ppb
Tetrachloroethylene	(PCE)	-----	1 ppb
Trans-1,2-dichloroethene	(DCE)	-----	1 ppb

The GWPS shall be applied at all compliance points.

The permittee shall be in compliance when all wells reach the GWPS or when hydraulic control is established in wells exceeding the GWPS.

7. Within 180 days of the EDP the permittee shall install additional monitoring wells beyond those required in this permit to define the extent of ground water contamination in all directions. Drilling shall continue until the monitoring wells demonstrate that the GWPS has been attained.
8. Within 60 days of the EDP, Airtron shall conduct an exposure assessment to determine the exposure (if any) of Mennen employees to hazardous pollutants in supply wells P-1 and P-2. The exposure assessment shall include the fountain area and other areas that may result in direct contact or inhalation exposure. Airtron shall also provide information on all uses and discharge points for ground water from Mennen wells P-1 and P-2 since 1977.

If Mennen does not allow Airtron access to their property for this study then Airtron shall reimburse Mennen for the cost of conducting the exposure assessment.

9. Halocarbon contamination that has left the Airtron property shall not impact any water supply wells. If contamination does impact a water supply well (Mennen Production Wells P-1, P-2) Airtron shall take any and all action necessary to restore that water supply to precontamination quality (ie. background ground water quality) if requested to do so by Mennen.
10. If, Airtron is to utilize Mennen Production P-1 and P-2 to maintain hydraulic control of ground water contamination then (see Special condition 3), Airtron shall submit well logs and design details on Mennen Production Wells P-1 and P-2. This shall include screen setting, depth of wells and geological logs.

Airtron shall maintain daily records of pumping rates in P-1 and P-2 and submit this information to the Department with the quarterly ground water data.

11. After review of past Airtron submittals a gasoline storage tank and pump is/or was located in the vicinity of the present drum storage area (see Attachment III). Also identified at the site was a 10,000-gallon No.4 fuel oil tank. Airtron must provide the documentation demonstrating the integrity of both the fuel oil tank (and all its associated piping), and the gasoline tank to the Bureau of Ground Water Discharge Control. All underground storage tanks must be registered with the Bureau of Underground Storage Tanks, at [(609) 292-3156].
12. If monitoring wells demonstrate that hydraulic control is not being attained, the permittee shall within 90 days of that determination add additional hydraulic control points.

13. This permit may be modified, by the Department, to require additional hydraulic controls based on new ground water data or changes in existing data.



State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

DIVISION OF WASTE MANAGEMENT

32 E. Hanover St., CN 027, Trenton, N.J. 08625

JACK STANTON
DIRECTOR

LINO F. PEREIRA
DEPUTY DIRECTOR

03 MAR 1983

AIRTRON INC
DIVISION LITTON SYSTEMS
Joseph Loschiavo, Exec VP
200 East Hanover Avenue
Morris Plains, NJ 07950

RE: Facility Operating Status

Dear Sir:

The Bureau of Hazardous Waste Engineering has reviewed your company's response to the Notice of Violation, Failure to Submit Annual Report. The Bureau finds that the response contains adequate information to determine the operating status of this facility with respect to N.J.A.C. 7:26-1 et seq., the New Jersey Hazardous Waste Management Regulations. The Bureau has determined that the company's hazardous waste treatment, storage or disposal facility as delineated in the company's RCRA Part A application and identified by the following EPA ID Number:

EPA ID NO. NJD030239412

has been excluded from regulations under N.J.A.C. 7:26-1.1 et seq. because your facility accumulates hazardous waste on-site for less than 90 days. This exclusion classifies your facility solely as a generator provided the following conditions are complied with:

1. All such waste is, within 90 days or less, shipped off-site to an authorized facility or placed in an on-site authorized facility, as defined at N.J.A.C. 7:26-1.4.
2. The waste is placed in containers which meet the standards of N.J.A.C. 7:26-7.2 and are managed in accordance with N.J.A.C. 7:26-9.4(d).
3. The date upon which each period of accumulation begins is clearly marked and visible for inspection on each container.
4. The generator complies with the requirements for owners and operators of N.J.A.C. 7:26-9.6 and 9.7 concerning preparedness and prevention, contingency plans and emergency procedures as well as N.J.A.C. 7:26-9.4(g) concerning personnel training.

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5. For bulk accumulation of dry hazardous waste materials, the waste pile is managed according to the following:
- (i) The waste pile is no larger than 200 cubic yards; and
 - (ii) The pile shall be placed on an impermeable base that is compatible with the waste; and
 - (iii) Run-on shall be diverted away from the pile; and
 - (iv) Any leachate and run-off from the pile must be collected and managed as a hazardous waste.

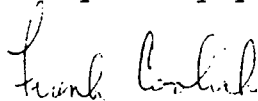
This written acknowledgement of the exclusion of the above identified facility from N.J.A.C. 7:26-1 et seq. is based expressly on the review of the aforementioned correspondence. This letter makes no claim as to the extent and physical condition of the actual hazardous waste activities occurring at the site mentioned above.

Your company's hazardous waste facility above is no longer included in DEP's list of "existing facilities" (see N.J.A.C. 7:26-1.4 and 12.3) and therefore does not need to conform with the interim operating requirements of N.J.A.C. 7:26-1 et seq. for "existing facilities" which would include the TSD facility annual report. It is the company's responsibility to operate within the conditions listed above. To operate a hazardous waste facility without prior approval from the DEP is a violation of the Solid Waste Management Act N.J.S.A. 13:1E-1 et seq.

As a result of the conclusions previously made, the Notice of Violation entitled "Failure to Submit Annual Report" signed by Mr. David Shotwell is rescinded and need not be complied with.

If you have any questions on this matter, please call my office at (609) 292-9880.

Very truly yours,



Frank Coolick, Chief
Bureau of Hazardous Waste Engineering

FC:jb

cc Dave Shotwell
NJDEP, Division of Waste Management

Tom Taccone
USEPA, Region II



AIRTRON

200 East Hanover Avenue Morris Plains, New Jersey 07950 201 539-5500

March 24, 1983

Mr. Frank Coolich
Bureau Chief of Hazardous Waste & Engineering
32 E. Hanover St.
Trenton, N.J. 08625

RE: E.P.A. I.D. No. N.J. D030239412

Dear Mr. Coolich:

As per my telephone conversation of March 24, 1983 with Mr. Patel of your staff, I wish to inform you of the following: Our original part "A" TSD application was in error. Therefore, Process Activity Code T01 must be deleted from the permit application. However, we would like to maintain Process Activity Code S01 for 55 gal. containers which our facility uses to hold plating waste sludge which we then remove within the 90 day period to an approved disposal facility. Our generation of final effluent is covered by our N.J.P.D.E.S. permit No. N.J.0025739.

Very truly yours,

A handwritten signature in cursive script that reads 'John A. Nicola'.

John A. Nicola
Plant Engineer

jn/dc

cc: Bob Patel
D. Lepore
J. LoSchiavo

**DEPARTMENT OF CONSERVATION
AND ECONOMIC DEVELOPMENT
Division of Water Policy & Supply
WELL RECORD**

Permit No. 21-3898

Application No. _____

County _____

The redacted information consists of names and/or addresses of private individuals. Disclosure of this information would be invasive of personal privacy and thus is exempt from mandatory disclosure by virtue of Exemption 6 of the FOIA, 5 U.S.C. 552(b)(6).

1. OWNER Ex. 6 [REDACTED] ADDRESS Old Wood Rd. Morris Plains, N.J.
Owner's Well No. 1 SURFACE ELEVATION _____ Feet
(Above mean sea level)
2. LOCATION Old Wood Rd., Morris Plains, N. J.
3. DATE COMPLETED 10/6/54 DRILLER Frank J. Bott
4. DIAMETER: Top 6 Inches Bottom 6 Inches TOTAL DEPTH 135 Feet
5. CASING: Type Steel Diameter 6 Inches Length 100 Feet
6. SCREEN: Type _____ Size of Opening _____ Diameter _____ Inches Length _____ Feet
Range in Depth { Top _____ Feet Geologic Formation _____
Bottom _____ Feet
Tail piece. Diameter _____ Inches Length _____ Feet
7. WELL FLOWS NATURALLY _____ Gallons per Minute at _____ Feet above surface
Water rises to _____ Feet above surface
8. RECORD OF TEST: Date 10/6/54 Yield 8 Gallons per minute
Static water level before pumping 54 Feet below surface
Pumping level 84 feet below surface after 3 hours pumping
Drawdown 30 Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
How Pumped Plunger Pump how measured 5 gal. Pail
Observed effect on nearby wells none
9. PERMANENT PUMPING EQUIPMENT:
Type Jet Capacity 5 Gallons per minute
How Driven Elect. Motor Horse Power 1/2 R.P.M. 3400
Depth of pump in well 80 Feet Depth of Foot piece in well _____ Feet
Depth of Air Line in well _____ Feet Type of Meter on Pump _____
10. USED FOR Domestic AMOUNT { Average _____ Gallons Daily
Maximum _____ Gallons Daily
11. QUALITY OF WATER good Sample: Yes _____ No. _____
Taste _____ Odor _____ Color _____ Temperature _____ °F
12. LOG Dead sand to 100ft then red shale Are samples available? _____
(Give details on back of sheet or on separate sheet)
13. SOURCE OF DATA _____
14. DATA OBTAINED BY Frank J. Bott DATE 10/6/54

(Note: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

N-1

MENNEN

25-13-3-6-7

DEPARTMENT OF CONSERVATION
AND ECONOMIC DEVELOPMENT
DIVISION OF WATER POLICY & SUPPLY

Permit No. 35-14,098
Application No. _____
County _____

The redacted information consists of names and/or addresses of private individuals. Disclosure of this information would be invasive of personal privacy and thus is exempt from mandatory disclosure by virtue of Exemption 6 of the FOIA, 5 U.S.C. 552(b)(6).

WELL RECORD

1. OWNER Ex. 6 ADDRESS Montville, N.J.
Owner's Well No. _____ SURFACE ELEVATION _____ Feet
(Above mean sea level)
2. LOCATION Viewmont Terrace, Montville, N.J.
3. DATE COMPLETED Nov. 30, 1958 DRILLER John Lauritsen
4. DIAMETER: top 6 inches Bottom 5 inches TOTAL DEPTH 200 Feet
5. CASING: Type steel drive casing Diameter 5 inches Length 20 Feet
6. SCREEN: Type _____ Size of Opening _____ Diameter _____ inches Length _____ Feet
Range in Depth { Top _____ Feet
Bottom _____ Feet Geologic Formation sand & Rotten rock
Tail piece: Diameter _____ inches Length _____ Feet
7. WELL FLOWS NATURALLY _____ Gallons per Minute at _____ Feet above surface
Water rises to _____ Feet above surface
8. RECORD OF TEST: Date November 30, 1958 Yield 10 Gallons per minute
Static water level before pumping 50 Feet below surface
Pumping level 10 feet below surface after 0 hours pumping
Drawdown 50 Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
How Pumped submersible pump How measured 5 gallon pail
Observed effect on nearby wells none
9. PERMANENT PUMPING EQUIPMENT:
Type _____ Mfrs. Name _____
Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
Depth of Air Line in well _____ Feet Type of Meter on Pump _____ Size _____ inches
10. USED FOR Household AMOUNT { Average _____ Gallons Daily
Maximum _____ Gallons Daily
11. QUALITY OF WATER _____ Sample: Yes _____ No _____
Taste _____ Odor _____ Color _____ Temp. _____ OF
12. LOG _____ Are samples available? _____
(Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy)
13. SOURCE OF DATA _____
14. DATA OBTAINED BY _____ Date _____

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements etc.)

N-2

DEPARTMENT OF CONSERVATION
AND ECONOMIC DEVELOPMENT
DIVISION OF WATER POLICY & SUPPLY

Permit No. _____
Application No. _____
County _____

WELL RECORD

American T & T Co.

88 Horsehill Rd. Cedar Knolls, N.J.

1. OWNER _____ ADDRESS _____
2. Owner's Well No. _____ SURFACE ELEVATION _____ Feet
Cedar Knolls, Morris Co. (Above mean sea level)
3. LOCATION _____ DATE COMPLETED Dec. 18, 1972 DRILLER Wm. Stothoff Co., Inc.
4. DIAMETER: top _____ inches Bottom _____ inches TOTAL DEPTH 164 Feet
steel pipe 6
5. CASING: Type _____ Diameter _____ inches Length _____ Feet
6. SCREEN: Type _____ Size of Opening _____ Diameter _____ inches Length _____ Feet
- Range in Depth { Top _____ Feet
Bottom _____ Feet
- Geologic Formation _____
- Tail piece: Diameter _____ inches Length _____ Feet
7. WELL FLOWS NATURALLY _____ Gallons per Minute at _____ Feet above surface
Water rises to 12/20/72 1/4/73 feet above surface 20
8. RECORD OF TEST: Date _____ Yield _____ Gallons per minute
Static water level 94 feet below surface before pumping
Pumping level 83 feet below surface after _____ hours pumping
Drawdown 2 HP Sub. pump Feet Specific Capacity _____ Gals. per min. per ft. of drawdown 2" meter
How Pumped none How measured _____
- Observed effect on nearby wells _____
9. PERMANENT PUMPING EQUIPMENT:
Type _____ Mfrs. Name _____
Capacity _____ G.P.M. How Driven _____ H.P. _____ F.P.M. _____
Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
Depth of Air Line in well _____ Feet Type of Motor on Pump _____ Size _____ inches
Industrial
10. USED FOR _____ AMOUNT { Average _____ Gallons Daily
Maximum _____ Gallons Daily
11. QUALITY OF WATER unknown Sample: Yes _____ No _____
Taste _____ Odor _____ Color _____ Temp. _____ OF
12. LOG _____ Are samples available? _____
(Give details of log on back of sheet. If electric log was made, please furnish copy.) Wm. Stothoff Co., Inc.
13. SOURCE OF DATA Wm. Stothoff Co. 1/4/73
14. DATA OBTAINED BY _____ Date _____

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements etc.)

DEPARTMENT OF CONSERVATION
AND ECONOMIC DEVELOPMENT
DIVISION OF WATER POLICY & SUPPLY
WELL RECORD

Permit No. 25-15132
Application No. _____
County _____

OWNER Ex. 6 ADDRESS Ex. 6 Marble Plains

Owner's Well No. _____ SURFACE ELEVATION _____ Feet
(Above mean sea level)

LOCATION Ex. 6 Marble Plains, N.J.

DATE COMPLETED 3-25-69 DRILLER William Heatty

METER: top 6" Inches Bottom 6" Inches TOTAL DEPTH 157' Feet

Casing: Type Steel Diameter 6 Inches Length 157' Feet

OPENING: Type _____ Size of Opening _____ Diameter _____ Inches Length _____ Feet

Range in Depth { Top _____ Feet
Bottom _____ Feet
Geologic Formation 0 - 25' Sand 25-150 clay
150' - 157' Sand

Drill pipe: Diameter _____ Inches Length _____ Feet

WATER FLOWS NATURALLY _____ Gallons per Minute at _____ Feet above surface

Water rises to _____ Feet above surface

DATE OF TEST: Date 3-24-69 Yield 15 Gallons per minute

Static water level before pumping 60' Feet below surface

Working level 80' feet below surface after 4 hours pumping

Drawdown 20 Feet Specific Capacity _____ Gals. per min. per ft. of drawdown

Well pumped Submersible pump How measured Water Level tester

Observed effect on nearby wells none

PERMANENT PUMPING EQUIPMENT:

Type Submersible Mfrs. Name Jacuzzi

Capacity 10 G.P.M. How Driven elec. H.P. 1/2 R.P.M. _____

Depth of Pump in well 85' Feet Depth of Footpiece in well _____ Feet

Depth of Air Line in well _____ Feet Type of Meter on Pump _____ Size _____ Inches

USED FOR domestic AMOUNT { Average _____ Gallons Daily
Maximum _____ Gallons Daily

QUALITY OF WATER good Sample: Yes _____ No _____

Taste good Odor none Color clear Temp. _____ OF

Are samples available? _____
(Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy)

DATE OF DATA William Heatty

DATA OBTAINED BY William Heatty Date 3/25/69 N-4

The redacted information consists of names and/or addresses of private individuals. Disclosure of this information would be invasive of personal privacy and thus is exempt from mandatory disclosure by virtue of Exemption 6 of the FOIA, 5 U.S.C. 552(b)(6).

(10)

DEPARTMENT OF CONSERVATION
AND ECONOMIC DEVELOPMENT
DIVISION OF WATER POLICY & SUPPLY
WELL RECORD

25-13-3515
Permit No. 25-12-108
Application No. _____
County _____

1. OWNER Ex. 6 ADDRESS Bailey Hollow Rd, Morris Plains, N.J.
Owner's Well No. _____ SURFACE ELEVATION 500' Feet
(Above mean sea level)
2. LOCATION Bailey Hollow Rd, Morris Plains, N.J.
3. DATE COMPLETED June 18, 1964 DRILLER Mabey Brothers
4. DIAMETER: top 6" inches Bottom 6" inches TOTAL DEPTH 87' Feet
5. CASING: Type Drive Diameter 6" inches Length 27' Feet
6. SCREEN: Type _____ Size of Opening _____ Diameter _____ inches Length _____ Feet
- Range in Depth { Top _____ Feet
Bottom _____ Feet Geologic Formation Granite
- Tail piece: Diameter _____ inches Length _____ Feet
7. WELL FLOWS NATURALLY _____ Gallons per Minute at _____ Feet above surface
Water rises to _____ Feet above surface
8. RECORD OF TEST: Date June 17, 1964 Yield 4 Gallons per minute
Static water level before pumping 37' Feet below surface
Pumping level 60' feet below surface after 3/4 hours pumping
Drawdown 23' Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
How Pumped Bailer Test How measured 5 gal. pail
Observed effect on nearby wells None
9. PERMANENT PUMPING EQUIPMENT:
Type Did Not install Mfrs. Name _____
Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
Depth of Air Line in well _____ Feet Type of Meter on Pump _____ Size _____ inches
10. USED FOR House hold AMOUNT { Average _____ Gallons Daily
Maximum _____ Gallons Daily
11. QUALITY OF WATER Good Sample: Yes _____ No _____
Taste Good Odor None Color Clear Temp. _____ of
12. LOG 10' Lint, 77' Granite Are samples available? _____
(Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy)
13. SOURCE OF DATA Mabey Brothers
14. DATA OBTAINED BY Mabey Brothers Date Aug. 7, 1964

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements etc.)

N-5

Converse Environmental East Caldwell, N.J. Fairfield, CT.				WELL LOG				WELL No. MW-201/B-201			
PROJECT Airtron								SHT. NO. 1 OF 6			
CLIENT Litton Industries								PROJ. NO. 87-47400-01			
CONTRACTOR Empire Soil Investigation, Inc.								ELEVATION (Grd) 398.51'			
GROUNDWATER				BORING	CASING	SAMPLE	CORE	TUBE	DATUM AMSL		
DATE	TIME	DEPTH	CASING	TYPE		SS			DATE START 6-30-87		
8-7-87		43.10	0.91	DIA.		2"			DATE FINISH 7-17-87		
				WT.		140#			DRILLER R. Logel		
				FALL		30"			CEE REP. R. Zelle		
DEPTH FT.	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	SYMBOL	STRATIGRAPHY	REMARKS	WELL				
1						Boring was drilled on a berm @ 2.70' higher in elevation than the ground surface of MW-201					
2						Ground Surface					
3							Locking flus mount compl.				
4							cement				
5		S-1	18		Brown Sandy Clayey Silt, trace gravel (ML/GM) Till	Moist Firm					
6			16				Benseal Grout				
7			18								
8			25								
9											
10		S-2	5		Do. (ML/GM)	Moist Firm	Sch 40 8" Dia Steel casing				
11			14								
12			19								
13			15								
14											
15		S-3	10		Do. (ML/GM)	Moist Firm	Sch 40 4" Dia Flush threaded PVC riser				
16			39								
17			14								
18			18								
19											
20		S-4	4		Brown Clay and Silt some Sand, trace Gravel (ML/GM) Till	V. Moist Slightly Firm	cement Bentonite Grout				
21			3								
22			2								
			6								

FOR INTERPRETATION OF SOIL, ROCK AND GROUNDWATER CONDITIONS, SEE TEXT OF CONVERSE ENVIRONMENTAL EAST REPORT, OF WHICH THIS LOG IS A PART.

N-6

Converse Environmental East Caldwell, N.J. Fairfield CT.				WELL LOG		WELL No. MW-201/B-20	
PROJECT Airtron				SHT. NO. 2 OF 6			
CLIENT Litton Industries				PROJ. NO. 87-47400-01			
DEPTH FT.	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	STRATIGRAPHY	REMARKS	WELL	
23							14"
24			8				8"
25		S-5	11	Do (ML/GM) Till	No Rec.		4"
26			14				
27			22				
28							
29		A	10	Do (ML/GM)	Dry		
30		S-6	10	Light brown sand, trace to some Silt, trace fine gravel (SW)		Sch 40 8" DIA steel casing	
31		B	10				
32			10				
33							
34							
35		S-7	15	Do (SW)	Dry		
36			16				
37			18				
38			19				
39							
40			14			Sch 40 4" DIA flush threaded PVC Riser	
41		S-8	20	Do	V. Moist		
42			27	(SW)			
43						Cement/ Bentonite Grout	
44							
45		S-9	12	Light brown sand, some Silt, trace fine gravel (SP)	Wet		
46			12		very permeable		
47			12				

FOR INTERPRETATION OF SOIL, ROCK AND GROUNDWATER CONDITIONS, SEE TEXT OF CONVERSE ENVIRONMENTAL EAST REPORT, OF WHICH THIS LOG IS A PART.

M-7

Converse Environmental East Caldwell, N.J. Fairfield CT.				WELL LOG		WELL No. MW-201/B-201	
PROJECT Airtron						SHT. NO. 3 OF 6	
CLIENT Litton Industries						PROJ. NO. 87-47400-01	
DEPTH FT.	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	STRATIGRAPHY	REMARKS	WELL	
50		A	13	(SW)	Permeable		
		S-10	24	Brown fine sand, some Silt (SP)			
			26				
			B				
55		A	14	Do (SP) with clay seam	Wet		
		S-11	21	Light Brown Sand, trace to some Silt, trace gravel (SW)			
			21				
			B				
		S-12	20	Light brown clay Silt, trace fine sand, trace fine gravel (ML)			
			27				
			54				
			32				
60		S-13	12	Reddish brown clay Silt, some sand, trace fine gravel (ML/ GM) Till	Very Firm		
			16				
			24				
			27				
		S-14	50	Do with layer of Silty sand			
			46				
			52				
			40				
		S-15		Brown Silt, trace to some fine sand (ML)			
			25				
			30				
	70			35			
			35				

FOR INTERPRETATION OF SOIL, ROCK AND GROUNDWATER CONDITIONS, SEE TEXT OF CONVERSE ENVIRONMENTAL EAST REPORT, OF WHICH THIS LOG IS A PART.

M-8

Converse Environmental East Caldwell, N.J. Fairfield CT.				WELL LOG		WELL No. MW-201/B-201	
PROJECT Airtron				SHT. NO. 4 OF 6			
CLIENT Litton Industries				PROJ. NO. 87-47400-01			
DEPTH FT.	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	STRATIGRAPHY	REMARKS	WELL	
75		S-16	28 25 21 20	Brown Sand, some gravel, trace Silt (SW)	Permeable Wet Loose	Benseal Grout	14" 8" 4"
80		S-17	48 45 16 12	Brown Gravelly Sand (SP/GP)	very permeable	Sch 40 8" DIA steel casing	
85		S-13	30 33 19 23	Do. (SP/GP)	very permeable	Sch 40 4" DIA flush thread PVC Riser	
90		S-19	50 47 49 54	Brown clayey Silt, some sand, trace gravel (ML/GM) Till	Firm	Cement/ Bentonite Grout	
95		S-20	180 65 65 70	Do. with cobbles	Cobbles in tip		

FOR INTERPRETATION OF SOIL, ROCK AND GROUNDWATER CONDITIONS, SEE TEXT OF CONVERSE ENVIRONMENTAL EAST REPORT, OF WHICH THIS LOG IS A PART.

Converse Environmental East Caldwell, N.J. Fairfield CT.				WELL LOG		WELL No. MW-201/B-201	
PROJECT Airtron						SHT. NO. 5 OF 6	
CLIENT Litton Industries						PROJ. NO. 87-47400-01	
DEPTH FT.	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	STRATIGRAPHY	REMARKS	WELL	
100		S-21		Gray clayey Silt (ML)	Wet Firm	Cement/ Bentonite Grout Drilled to 97.0' Sch 40- 8" DIA casing driven to 98.5' below ground surface	
			23				
			30				
			38				
105		S-22		Reddish brown clayey Silt, some sand, some to trace gravel (ML/GM) Till	Moist Firm	Benseal Grout	
			50				
			55				
			140				
110		S-23		Do (ML/GM)	Moist Firm	Sch 40 4" DIA flush threaded PVC Riser	
			90				
			100/1"				
115		S-24		Do. (ML/GM)	Moist Firm	Bentonite Pellets	
			30 43				
			43				
			50				
120		S-25		Gray fine sandy Silt, with layers of Silty fine sand and fine sand, some Silt (ML/SM)	Wet	Sch 40 4" DIA flush threaded #10 PVC screen stainless steel centralizer 0 0 Graded Jessie Morie Sand	
			48				
			57				
			65				
			98				

FOR INTERPRETATION OF SOIL, ROCK AND GROUNDWATER CONDITIONS, SEE TEXT OF CONVERSE ENVIRONMENTAL EAST REPORT, OF WHICH THIS LOG IS A PART.

Converse Environmental East Caldwell, N.J. Fairfield CT.				WELL LOG		WELL No. MW-201/B-201	
PROJECT Airtron				SHT. NO. 6 OF 6			
CLIENT Litton Industries				PROJ. NO. 87-47400-01			
DEPTH FT.	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 8"	STRATIGRAPHY	REMARKS	WELL	
125		S-26		Do. (ML/SM)	Wet	Sch. 40 4" Dia. Flush Threaded #10 Slot PVC Screen	
130		S-27		Do. (ML/SM)	Wet	00 Graded Jessie Morie Sand	
135		S-28	85 140	Brown clayey silt, some sand, some trace gravel	Moist Firm	Stainless Steel Centralizer Sch. 40 4" Dia. Flush Threaded PVC Sump	
				End of Boring @ 135.0'			

FOR INTERPRETATION OF SOIL, ROCK AND GROUNDWATER CONDITIONS. SEE TEXT OF CONVERSE ENVIRONMENTAL EAST REPORT, OF WHICH THIS LOG IS A PART.

1-0
D-1076

WELL INVENTORY SURVEY

AIRTRON, INC.
(87-47400-01)

Q

** Pump Test Data Available

TABLE 15

WELL INVENTORY SURVEY

AIRTRON, INC.
(87-47400-01)

Well No.	Owner	Address	Distance From Site (ft.)	Depth (ft.)	Use	Water Bearing Formation	Yield (gpm)	Note
12	Mennen Co.	Hanover Ave. Morris Plains	500	85	NA	NA	400	
13	Mennen Co.	Hanover Ave. Morris Plains	500	207	NA	Rock	NA	
14	Mennen Co.	Hanover Ave. Morris Plains	500	123	NA	Shale	NA	
15	Mennen Co.	Hanover Ave. Morris Plains	500	60	M	Sand	1	
16	Mennen Co.	Hanover Rd. Morris Plains	500	60	M	Sands/Silt	5	
17	American T&T Co.	Cedar Knolls	1,300	164	I	NA	20	
18	Swisscomatic Incorporated	NA	1,300	400	I	Sandstone	250	
19	Ex. 6	Lake Valley Rd. Morris Twp.	6,200	80	(D)	Traprock	10	
20	Ex. 6	Egbert Ave. Morristown	8,100	298	(D)	Granite	8	
21	Ex. 6	Ex. 6	7,700	275	D	Granite	2	
22	Ex. 6	Ex. 6 Morris Plains	5,700	112	Agricultural	Sand/gravel	7	

* Water Chemistry Data Available

** Pump Test Data Available

The redacted information consists of names and/or addresses of private individuals. Disclosure of this information would be invasive of personal privacy and thus is exempt from mandatory disclosure by virtue of Exemption 6 of the FOIA, 5 U.S.C. 552(b)(6).

TABLE 15

WELL INVENTORY SURVEY

AIRTRON, INC.
(87-47400-01)

Well No.	Owner	Address	Distance From Site (ft.)	Depth (ft.)	Use	Water Bearing Formation	Yield (gpm)	Note
23	Parsippany Construction Co.	Garden St. & New St. Morristown	5,300	32	Dewatering	Silty Sand	NA	
24	Parsippany Construction Co.	Garden St. & New St. Morristown	5,300	36	Dewatering	Silty Sand	NA	
25	Texaco	48 Spring St. Morristown	6,000	12	M	Silty Clay	NA	
26	Texaco	48 Spring St. Morristown	6,000	12.5	M	Silty Clay	NA	
27	Texaco	48 Spring St. Morristown	6,000	13.7	M	Silt	NA	
28	Texaco	48 Spring St. Morristown	6,000	15.5	M	Silt	NA	
29	Texaco	48 Spring St. Morristown	6,000	13.2	M	Silt	NA	
30	Texaco	48 Spring St. Morristown	6,000	12.8	M	Silt	NA	
31	Ex. 6	Ex. 6 Morristown	10,000	210	D	Rock	NA	
32	All Soul Hospital	Morristown	10,200	506	D	Granite	205	

* Water Chemistry Data Available

** Pump Test Data Available

TABLE 15
WELL INVENTORY SURVEY

AIRTRON, INC.
(87-47400-01)

Well No.	Owner	Address	Distance From Site (ft.)	Depth (ft.)	Use	Water Bearing Formation	Yield (gpm)	Note
33	Mac-Cullough Hall Museum	45 Mac-Cullough St. Morristown	9,300	155	D	Gravel	24	
34	Jersey Central Power & Light Co.	Morristown	6,100	140	D	Sand/gravel	15	
35	Texaco	Morris St. & Olyphant Place, Morristown	7,000	14.5	M	Sand/Silt	NA	
36	Texaco	Morris St. & Olyphant Place, Morristown	7,000	14.5	M	Sand	NA	
37	Texaco	Morris St. & Olyphant Place, Morristown	7,000	14.5	M	Sand	NA	
38	Texaco	Morris St. & Olyphant Place, Morristown	7,000	14.5	M	Sand	NA	
39	Morristown	Overlook Rd. Morristown	10,700	442	NA	NA	NA	
40	Mennen Co.	Hanover Ave. Morristown	500	110	NA	Sand	100	
41	Airtron	Hanover Ave.	—	21	M	Silty Clay	NA	
42	Airtron	Hanover Ave.	—	72	M	Sand/gravel	NA	
43	Mennen Co.	Hanover Ave.	500	100	NA	Sand	300	

* Water Chemistry Data Available

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TABLE 15

WELL INVENTORY SURVEY

AIRTRON, INC.
(87-47400-01)

Well No.	Owner	Address	Distance From Site (ft.)	Depth (ft.)	Use	Water Bearing Formation	Yield (gpm)	Note
14	Ex. 6	Ex. 6 Whippany	7,200	128	D	Sand/gravel	30	
45	Whippany Paper Co.	Eden Mill, Whippany	9,000	97	I	Sand/gravel	560	**
46	Whippany Paper Co.	Eden Mill, Whippany	9,000	63	I	Sand/Gravel	026	**
47	Torcan Inc.	E. Hanover Ave. Morristown	3,800	500	I	Shale	104	
48	USGS	20' W of Whippany River 200' N of Hanover Ave.	5,000	148	M	Sand	105	**
49	NA	111 Ridgedale Rd. Morris Twship.	5,200	163	I	Gravel	70	
50	B.W.B. Corp.	160 Ridgedale Ave. Morris Twship.	5,000	350	I	Sandstone	45	
51	T. Landi & Son	Ridgedale Ave. Morristown	5,300	48	I	Sand/Gravel	90	
52	USGS 100' NW of Whippany River;	1400' N Hanover Ave. & River	5,500	100	M	NA	NA	
53	Ex. 6	Ex. 6 Morristown	9,500	291	Agricultural	Sand	22	
54	Ex. 6	Ex. 6 Whippany	7,600	125	D	Gravel	15	

* Water Chemistry Data Available

** Pump Test Data Available

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TABLE 15

WELL INVENTORY SURVEY

AIRTRON, INC.
(87-47400-01)

Well No.	Owner	Address	Distance From Site (ft.)	Depth (ft.)	Use	Water Bearing Formation	Yield (gpm)	Note
55	Ex. 6	Ex. 6 Whippany	7,600	130	D	Sand/gravel	15	
56	Exxon Co.	Whippany Rd. Morristown	8,500	20	M	Sand/Gravel	NA	
57	Exxon Co.	Whippany Rd. Morristown	8,500	14	M	Sand/Silt	NA	
58	Exxon Co.	Whippany Rd. Morristown	8,500	14	M	Sand	NA	
59	Exxon Co.	Whippany Rd. Morristown	8,500	14	M	Sand/Silt/Clay	NA	
60	Exxon Co.	Whippany Rd. Morristown	8,500	14	M	Silt/Clay	NA	
61	Exxon Co.	Whippany Rd. Morristown	8,500	15.5	M	Sand/Silt	NA	
62	Exxon Co.	Whippany Rd. Morristown	8,500	23.5	M	Silt/Clay	NA	
63	E	Ex. 6 Convent Station	8,600	65	NA	Sand/gravel	20	
64	Mapco Inc.	Whippany Rd. Morristown	8,000	166	NA	Sand	0	

* Water Chemistry Data Available

** Pump Test Data Available

TABLE 15
WELL INVENTORY SURVEY

AIRTRON, INC.
(87-47400-01)

Well No.	Owner	Address	Distance From Site (ft.)	Depth (ft.)	Use	Water Bearing Formation	Yield (gpm)	Note
65	Mapco Inc.	Whippany Rd. Morristown	8,000	140	NA	Gravel	168	
66	Mapco Inc.	Whippany Rd. Morristown	8,000	507	D	NA	22	
67	Mapco Inc.	Whippany Rd. Morristown	8,000	40	M	Silts/Sands	NA	
68	Mapco Inc.	Whippany Rd. Morristown	8,000	50	M	Silts/Sands	NA	
69	Mapco Inc.	Whippany Rd. Morristown	8,000	50	M	Silts/Sands	NA	
70	Mapco Inc.	Whippany Rd. Morristown	8,000	25	M	Silts/Sands	NA	
71	Mapco Inc.	Whippany Rd. Morristown	8,000	25	M	Silts/Sands	NA	
72	Mapco Inc.	Whippany Rd. Morristown	8,000	80	M	Silts/Sands	NA	
73	Mapco Inc.	Whippany Rd. Morristown	8,000	40	M	Silts/Sands	NA	
74	Mapco Inc.	Whippany Rd. Morristown	8,000	80	M	Silts/Sands	NA	

* Water Chemistry Data Available

** Pump Test Data Available

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TABLE 15

WELL INVENTORY SURVEY

AIRTRON, INC.
(87-47400-01)

Well No.	Owner	Address	Distance From Site (ft.)	Depth (ft.)	Use	Water Bearing Formation	Yield (gpm)	Note
75	Ex. 6	Ex. 6 Morristown	10,500	175	D	Sand/Clay	NA	
76	Ex. 6	Normandy Blvd. Morristown	10,300	197	D	Sand/Gravel	NA	
77	Ex. 6	Degan Lane, Morristown	12,000	146	D	NA	23	
78	Ex. 6	Ex. 6 Morristown	10,300	262	Agg	Shale	38	
79	Twin Oaks Indoor Tennis Courts		8,500	580	NA	Shale	100	
80	Morristown Memorial Hospital	Morristown	10,000	504	D	Sandstone	290	**
81	Allied Chemical	Columbia Rd. Morristown	12,000	273	NA	Sand/Gravel	20	
82	P.I.C. Realty Corp.	Lot 5, Bk 142 Chatham	12,200	50	M	Sand/Gravel	NA	
83	P.I.C. Realty Corp.	Lot 5, Bk 142 Chatham	12,200	50	M	Sand/Gravel	NA	
84	P.I.C. Realty Corp.	Lot 5, Bk 142 Chatham	12,200	50	M	Sand/Gravel	NA	
85	Allied Chemical	Columbia Rd. Morris Twshp.	12,000	231	NA	Sand/Gravel	20	

* Water Chemistry Data Available

** Pump Test Data Available

TABLE 15

WELL INVENTORY SURVEY

AIRTRON, INC.
(87-47400-01)

Well No.	Owner	Address	Distance From Site (ft.)	Depth (ft.)	Use	Water Bearing Formation	Yield (gpm)	Note
86	Allied Chemical	Columbia Rd. Morris Twshp.	12,000	147	NA	Sand/Gravel	0	
87	Allied Chemical	Columbia Rd. Morris Twshp.	12,000	231	NA	Sand/Gravel	50	
88	Allied Chemical	Columbia Rd. Morris Twshp.	12,000	178	NA	Sand/Gravel	NA	
89	Morristown Memorial Hospital	100 Madison Ave.	10,000	507	D	Rock	325	
90	Mt. Carmel Monastery	Madison Ave. Morris Twshp.	10,600	370	D	Shale	28	
91	Schering Realty Corp.	Lot 3, Bk 33 Madison Boro	12,300	150	Agg/I	Gravel/Sand	125	
92	Ex. 6	Old Glen Rd. Morristown	12,100	175	D	Clay	NA	
93	Allied Chemical	Columbia Rd. Whippany	12,000	253	M	Sand	329	
94	U.S. Insurance Group	305 Madison Ave.	12,500	370	I	Shale	298	
95	Jersey Central Pwr & Lt Co.	Morris Twshp.	12,900	600	I	Shale	170	
96	NJ Power & Light	Morristown	13,400	225	D	Sandstone	50	
97	Morris County Golf Club		13,500	271	I	Sand/Gravel	236	**

* Water Chemistry Data Available

** Pump Test Data Available

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TABLE 15

WELL INVENTORY SURVEY

AIRTRON, INC.
(87-47400-01)

Well No.	Owner	Address	Distance From Site (ft.)	Depth (ft.)	Use	Water Bearing Formation	Yield (gpm)	Note
78	Morris County Golf Club		13,500	238	D	Clay/Boulders	15	
99	Allied Chemical	Lot 86, Bk 431 Morris Twshp.	12,000	198	I	Sand/Gravel	198	
100	Ex. 6	Normandy Parkway Morristown	10,000	425	D	Rock	NA	
101	Blanchard Securities, Inc.	Columbia Rd. Hanover	13,400	132.5	D	Sand	350	**
102	Airtron	Hanover Rd.	—		M	Sand		
103	Airtron	Hanover Rd.	—		M	Sand		
104	Airtron	Hanover Rd.	—		M	Sand		
105	USGS	North of Hanover Rd.	—	100	M	Sand	NA	
106	USGS	North of Hanover Rd.	—	10	M	Sand	NA	
107	USGS	North of Hanover Rd.	—	300	M	Sand	NA	
108	NJ Bell Co.		6,800	384	I	NA	85	
109	1st National Bank		6,600	80	D	NA	15	
110	Whippany Paper		10,800	193	NA	NA	26	
111	Whippany Paper		9,000	72	I	NA	560	

* Water Chemistry Data Available

** Pump Test Data Available

TABLE 15

WELL INVENTORY SURVEY

AIRTRON, INC.
(87-47400-01)

Well No.	Owner	Address	Distance From Site (ft.)	Depth (ft.)	Use	Water Bearing Formation	Yield (gpm)	Note
12	Whippany Paper		9,000	66	I	NA	NA	
113	ITT Rayonier		7,800	128	I	NA	320	
114	ITT Rayonier		7,800	127	I	NA	15	
115	Airtron	200 Hanover Ave. Morris Plains	0	135	M	Sand/Silt	3	
116	Airtron	200 Hanover Ave. Morris Plains	0	128	M	Sand/Silt	6	
117	Airtron	200 Hanover Ave. Morris Plains	0	134	M	Sand/Silt	5	
118	Airtron	200 Hanover Ave. Morris Plains	0	72	M	Sand	3	
119	Airtron	200 Hanover Ave. Morris Plains	0	90	M	Sand	3	
120	Airtron	200 Hanover Ave. Morris Plains	0	67	M	Sand	5	

* Water Chemistry Data Available

** Pump Test Data Available

Let's protect our earth



DU

State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

DIVISION OF WATER RESOURCES

NORTHERN BUREAU OF REGIONAL ENFORCEMENT

1259 ROUTE 46, BUILDING 2
PARSIPPANY, NEW JERSEY 07054GEORGE G. MCCANN, P.E.
DIRECTORDIRK C. HOFMAN, P.E.
DEPUTY DIRECTOR

MAY 17 1989

Mr. William Hutchinson
Southeast Morris County MUA
P.O. Box 562M
101 Western Avenue
Morristown, New Jersey 07960

Dear Mr. Hutchinson

Re: Compliance Evaluation Inspection
Southeast Morris County Municipal
Utilities Authority
P.W. - ID No.: 1424001
Munic/County: Morristown, Morris County

A Compliance Evaluation Inspection of your facility was conducted by a representative of this Division on May 3, 1989. A copy of the completed inspection report form is enclosed for your information.

Your facility received a rating of "CONDITIONALLY ACCEPTABLE" due to the following deficiency:

1. There were no automatic alarms or windows on the chlorine room for the Wing Well and Todd Well, as required by N.J.A.C. 7:10-11.13(f).

NOTE: Undersized mains exist within your system. All future replacement of these mains must be at least 6" unless justified by hydraulic analysis by the Department.

Since the deficiency cited is presently, or may in the future, adversely affect effluent quality of water you provide to your customers, you are required to institute measures to correct the deficiency. A written report concerning specific details of the remedial measures to be instituted, as well as an implementation timetable, must be submitted to this Division within thirty (30) calendar days of the date of this correspondence.

Please be advised that the New Jersey Safe Drinking Water Act provides for substantial penalties for violations of the Act.

Please direct all correspondence and inquiries to Dana Ulrich, of my staff, who can be reached at (201) 299-7592 or by letter through this Division.

Thank you for your cooperation.

Very truly yours,

Elaine Stallings

Elaine Stallings, Supervisor
Safe Drinking Water and Water
Supply Enforcement
Northern Bureau of Regional
Enforcement

DCU:dc

Enclosure

c: Chief Joseph M. Mikulka Northern Bureau of Regional Enforcement
Robert Williams, USEPA - Region II
Health Officer of Morris Township
Health Officer of Hanover Township
Health Officer of Morris Plains
Health Officer of Mendham
Health Officer of Harding Township
Health Officer of Florham Park Boro
Health Officer of Par-Troy Hills
Health Officer of Chatham Township
Health Officer of Randolph Township

bc: Elaine Stallings
Dana Ulrich
Bureau File THRU E. Stallings
Bureau of Safe Drinking Water - County Book
Central File/Safe Drinking Water: PW#1424001
Enforcement Actions (Virginia Kennedy)

Form DWR-143
7/81

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
ENFORCEMENT & REGULATORY SERVICES



COMPLIANCE EVALUATION INSPECTION
PUBLIC COMMUNITY WATER SUPPLY

DATE 5/3/8GENERAL INFORMATION

PURVEYOR/
FACILITY Southeast Morris County N.J.A.

FILE LOCATION Morristown / Morris County PW-ID # 1424001

MAILING ADDRESS 101 Western Avenue, Morristown, NJ 07960

ADMIN. William Hutchinson, Superintendent REQUIRED T 3
LICENSES W 4

BUSINESS
TELEPHONE # Admin.: 538-5600 Licensed Operators: T 3 W 4

FACILITY DESCRIPTION

SOURCES: descriptions, locations, capacities(mgd): See Attachment #1:
SEMCNVA Source List

Est Tot Eff Cap: 14.1021

TREATMENT: source, type, capacities(mgd): See Attachment #1
SEMCNVA Source List

Est Tot Eff Cap: 14.1024

FINISHED WATER STORAGE: descriptions, locations, capacities(mgd): See Attachment #2
SEMCNVA Finished Water Storage

Est Tot Cap: 16.1124

EMERGENCY INTERCONNECTIONS: descriptions, available gallonage(mgd): 6" (Morris Co. NVA, Goldhill Rd.,
Nendham Twp.), 6" (Randolph Twp., W. Hanover Ave.), 8" (East Hanover,
Melanie Lane), 4" (Madison Boro, Alyonquin Pk.), 6" (Greystone Pk.)

Est Tot Avail: -

AUXILIARY POWER: location, type, capabilities: See Attachment #3
SEMCNVA Booster Stations

(These generators take over for the Booster Pumps.
Wells and chlorinators do not have auxiliary power.
Storage provides water in the event of a power outage) P-3



NJDEP • DIVISION OF WATER RESOURCES
PUBLIC COMMUNITY WATER SUPPLY INSPECTION



Page

DELIVERY INFORMATION

PLANT DELIVERED WATER (mgd, month, year) Max 10.697, 501 788 Min 7.376, 760 11/88 Annual 1988 Average 8.694, 121

BULK PURCHASES (provider, mgd) Morris County MUA (approx. 7.762)

BULK SALES (customer, mgd) Parsippany-Troy Hills (approx. 0.96.762)

NUMBER OF SERVICES 16,891 % METERED 100

MUNICIPALITIES SERVED (est. services in each) Morris Township (6152), Morrisburg (4072), Hanover Twp (4143), Morris Plains (1811), Mendham (342), Harding (284), Flocken Pct. (31), Par-Troy (22), Chatham Twp. (21), Randolph (13)

CURRENT/RECENT WATER RESTRICTIONS None

NEW CONSTRUCTION (Project Numbers) None

DISTRIBUTION MAINS: Sizing 4" (min) to 24" (max)
Pressures 28 PSI (min) to 200 PSI (max)
Hydrants/Flushing Program 1800 Annual

TOTAL ESTIMATED POPULATION SERVED 65,000

MONITORING & REPORTING

PARAMETER(S)	FREQUENCY REQUIRED	FREQUENCY PERFORMED
Coliform	<u>75 / YEAR</u>	<u>Done 1988 - 3/89</u>
Inorganics	<u>Yearly</u>	<u>Done 12/88</u>
Nitrate	<u>Yearly</u>	<u>Done 12/88</u>
Trihalomethanes	<u>Quarterly</u>	<u>Done 1988</u>
Organics	<u>1/3 years</u>	<u>Done 12/88</u>
Turbidity	<u>Daily</u>	<u>Done 1988 - 3/89</u>
<u>A 2812</u>	<u>21 Year</u>	<u>Done 3/88, 12/88</u>
<u>Radiochemical</u>	<u>1/4 Years</u>	<u>Done</u>
<u>Secondary</u>	<u>Yearly</u>	<u>Done 12/88</u>
<u>Sodium</u>	<u>Yearly</u>	<u>Done 12/88</u>

NAME OF LABORATORY Townley Research CERTIFICATION # 18071

ADDRESS Garden State Labs 07044
Water Works Labs 07673

COMPLIANCE EVALUATION

SOURCE DEFICIENCIES None

TREATMENT DEFICIENCIES Note No Automatic alarms or windows on Chlorine rooms for Wing Well and Todd Well (NJAC 7:10-11.13) (Swing doors replace panic hardware on chlorine rooms)



NJDEP - DIVISION OF WATER RESOURCES
PUBLIC COMMUNITY WATER SUPPLY INSPECTION



COMPLIANCE EVALUATION (Continued)

STORAGE AND/OR DISTRIBUTION DEFICIENCIES None

LICENSING, MONITORING AND/OR REPORTING DEFICIENCIES None

COMPLIANCE SAMPLING VIOLATIONS: None Taken

LOCATION	DATA SOURCE	PARAM	MAX CONTMNT LEVEL	RESULT	LOCATION	DATA SOURCE	PARAM	MAX CONTMNT LEVEL	RESULT

OVERALL COMPLIANCE RATING:

☐ ACCEPTABLE

☒ CONDITIONALLY ACCEPTABLE

☐ UNACCEPTABLE

NOTICE: YOU ARE REQUIRED TO INFORM THE N.J.D.E.P. IN WRITING OF YOUR ACTUAL OR INTENDED ACTIONS TO COMPLY WITH N.J.S.A. 58:12A-1 ET SEQ. VIA IMPLEMENTATION OF REMEDIAL MEASURES TO CORRECT THE DEFICIENCIES LISTED IN THIS REPORT. FAILURE TO ADEQUATELY RESPOND IN A TIMELY FASHION WILL RENDER YOU LIABLE FOR PENALTIES OF UP TO \$5,000.00 FOR EACH VIOLATION, PURSUANT TO N.J.A.C. 7:10-3.

INSPECTOR:

Dana Ulrich

Signature

Dana Ulrich

Name

Environmental Specialist Tr.

Title

Northern New Jersey Regional Ent.

Region

PERSON INTERVIEWED:

Charles Brown
Peter Ubertaccio

Name

Municipal Workers

Title

South East Morris County

Organization

Municipal Utility Auth.

Attachment #1SOUTHEAST MORRIS COUNTY
MUNICIPAL UTILITIES AUTHORITY

<u>SOURCE</u>	<u>PUMP RATE/CAPACITY</u>	<u>TREATMENT</u>
1. Black Brook Well #1 Near Morristown Airport Columbia Turnpike Hanover Township	1,034 GPM/1.489 MGD	Black Brook Wells 1 & 2 1. Gas chlorination (W + T 50% capacity) 2. Iron and Manganese removal (6 greensand filters with quarter KMnO ₄ regeneration)
2. Black Brook Well #2 Near Morristown Airport (closest to the road) Columbia Turnpike Hanover Township	904 GPM/1.30 MGD	
3. Clyde Potts Reservoir jct - Cold Hill Road/ Woodland Road Mendham Township	NA/1.8 MGD	1. Lime addition (pH adjustment) 2. Gas chlorination (2 F + P 50% capacity) 3. Polymer addition 4. CO ₂ feed - not used 5. KMnO ₄ addition - to be added.
4. Lidgerwood Well jct Lidgerwood Parkway/ Headley Road Morristown	Approx. 300 GPM/0.432 MGD Summer well	Gas chlorination (W + T 10% capacity)
5. Littleton Well #1 Adjacent to Brevent Plaza (in woods) Littleton Avenue Parsippany-Troy Hills	Approx. 200 GPM/0.288 MGD currently off-line	Littleton Wells 1 & 2 Gas chlorination (W + T 20% capacity) <i>Now Hypochlorination (5/3/89)</i>
6. Littleton Well #2 Adjacent to Brevent Plaza (closest to road) Littleton Road Parsippany-Troy Hills	220 GPM/0.317 MGD currently off-line	
7. Normandy Well Above entrance to Morristown Airport, Columbia Turnpike Hanover Township	Approx. 400 GPM/0.576 MGD	Hypochlorination (gas chlorination expected 1986)

JAN 16 '90 14:39

P.20/22

Attachment #1

<u>SOURCE</u>	<u>PUMP RATE/CAPACITY</u>	<u>TREATMENT</u>
8. Sand Spring Well Sand Spring Road Harding Township	Flowing artesian well/0.70 MGD Approx. 500 GPM	Gas chlorinat (W + T 10# cap city)
9. Shongum Well West Hanover Avenue Morris Township	50-100 GPM/0.108 MGD at 75 GPM	Gas chlorinat (W + T 20# cap city)
10. Todd Well Ridgedale Avenue Hanover Township	1575 GPM/2.268 MGD	Gas chlorinat (W + T 10# cap city)
11. Turnbull Lane Well In Convent News Apart- ment Complex, Franklin Street Morris Township/Morristown border	Approx. 250 GPM/0.360 MGD	Gas chlorinat (W + T 10# cap city)
12. Wing Well Ridgedale Avenue Hanover Township	3.100 GPM/4.464 MGD	Gas chlorinat (W + T 10# cap city)

Attachment #2SOUTHEAST MORRIS COUNTY
MUNICIPAL UTILITIES AUTHORITY

<u>FINISHED WATER STORAGE</u>	<u>CAPACITY (in million gallons)</u>
1. Bailey Hollow Ground Tank Bailey Hollow Road Morris Township	0.300
2. Baird Place Elevated Tank Baird Place (near Troy Hills Road) Hanover Township	1.000
3. Easley Ground Tank Eagle Nest Road Morris Township	2.000
4. Highland Woods (Shongum) Ground Tank off Tower Lane (near Lord Sterling Drive) Morris Township	0.500
5. Horse Hill (Countrywood) Ground Tank Countrywood Drive Hanover Township	1.000
6. Jones Woods Ground Tank off Western Avenue (behind Villa Walsh) Morris Township	2.000
7. Jones Woods Standpipe (same location as #6)	0.300
8. Littleton (Olde Idlewild) Concrete Ground Tank off Trowbridge Road on Dogwood (in woods) Morris Plains	0.120
9. Morris Plains Tank Route 53 (in Foxwood development) Morris Plains	1.000
10. Mountain Way (New Idlewild) Ground Tank Tower Hill Road Parasippany-Troy Hills	0.300
11. Normandy Standpipe #1 Oak Park Drive (near Woodruff Road) Morris Township	0.296
12. Normandy Standpipe #2 see #11	0.446

Attachment #2

<u>FINISHED WATER STORAGE</u>	<u>CAPACITY (in million gallons)</u>
13. Picatinny Ground Tank #1 by Hillcrest Avenue and Dorothy Drive (near Jones Woods) Morris Township	3.000
14. Picatinny Ground Tank #2 see #13	3.000
15. Rayonier Elevated Tank Fieldstone Drive (near Westview Drive) Hanover Township	0.200
16. Skyline Elevated Tank Skyline Drive Morris Township	0.150
17. Skyline Standpipe see #16	0.500

10. Mountain Way (New Idlewild) Ground Tank
Tower Hill Road
Parsippany-Troy Hills

0.300

11. Normandy Standpipe #1
Oak Park Drive (near Woodruff Road)
Morris Township

0.296

12. Normandy Standpipe #2
see #11

0.446

13. Daytime Standpipe
see #16

0.000

Attachment #3SOUTHEAST MORRIS COUNTY
MUNICIPAL UTILITIES AUTHORITYBOOSTER STATIONS

1. Black Brook
Near Morristown Airport
Columbia Turnpike
Hanover Township
2. Country Wood
Poplar Drive and Countrywood Drive
Hanover Township
3. Jockey Hollow
Western Avenue (across from former reservoir)
Morris Township
4. Jones Woods
(unused for 3-4 years)
Hillcrest Avenue
Morris Township
5. Knollwood
Knollwood Terrace (near Deer Run)
Mendham Township
6. Lake Valley
(junction of Mill Road
Morris Township
7. Malapardis
Malapardis Road
Morris Plains
8. Mountain Way
Mountain Way
Morris Plains
9. Shongum
West Hanover Avenue
Morris Township
10. Summit Road
Summit Road (near Michael Road)
Mendham Township
11. Todd/Wing (emergency use)
off Ridgedale Avenue
Hanover Township

EQUIPMENT

Two pumps

1. Three variable speed pumps.
2. ONAN 120 kw generator

1. Two pumps
2. Auxiliary generator

1. Three pumps (one is direct drive)
2. Auxiliary engine

Off-line since start up of Clyde Potts water treatment plant

2 pumps (1 serves as a backup)

1. One pump (direct drive)
2. Auxiliary engine

1. Three pumps (one is direct drive)
2. Auxiliary engine (one pump and motor in process of being refurbished)

Two pumps

One pump (used only when Clyde Potts is in service)

One pump

Let's protect our earth



State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

DIVISION OF WATER RESOURCES

NORTHERN BUREAU OF REGIONAL ENFORCEMENT

1259 ROUTE 46, BUILDING 2
PARSIPPANY, NEW JERSEY 07054GEORGE G. McCANN, P.E.
DIRECTORDIRK C. HOFMAN
DEPUTY DIRECTORParsippany-Troy Hills Water Department
1001 Parsippany Boulevard
Parsippany, New Jersey 07054

Attention: Frank Boyarski, Superintendent

Dear Mr. Boyarski:

Re: Compliance Evaluation Inspection
Parsippany-Troy Hills Water Department
P.W. - ID No.: 1429001
Munic/County: Parsippany-Troy Hills Township, Morris County

A Compliance Evaluation Inspection of your facility was conducted by a representative of this Division on June 30, 1988. A copy of the completed inspection report form is enclosed for your information.

Your facility received a rating of "UNACCEPTABLE" due to the following deficiencies:

1. Failure to notify customers of potential sources and adverse health effects of lead in drinking water before June 19, 1988 as required in the 1986 amendments to the Federal Safe Drinking Water Act.
2. The chlorinator at well #9 was not operating at the time of the inspection.
3. The chlorine room fan at well #15 was inoperable.
4. The overflow pipe screen was damaged at the Hector Road Tank.
5. During the inspection it was observed that contaminated ground water from well #7 is actively being pumped and discharged to a tributary of the Passaic River. This activity is governed by the New Jersey Pollutant Discharge Elimination System (NJPDDES) Regulations, N.J.A.C. 7:14A-1 et seq. These regulations state: "No person shall discharge any pollutant except in conformity with a valid NJPDDES permit." Our records indicate no such permit

exists for your facility. Parsippany-Troy Hills Township is therefore DIRECTED to contact the Bureau of Information Systems (BIS) at the following address to acquire the necessary materials for a NJPDES permit application. The completed application must be submitted to:

Chief George Caporale
Bureau of Information Systems
Wastewater Facilities Management Element
Division of Water Resources
CN-029
Trenton, New Jersey 08625

Any questions concerning the completion of the application should be addressed to Chief George Caporale or the BIS staff, who may be reached at (609) 984-4428.

A pre-application conference is strongly recommended and can be arranged by calling the Bureau of Industrial Waste Management at (609) 292-4860.

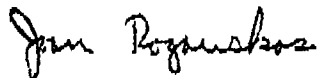
Since the deficiencies cited are presently, or may in the future, adversely affect the quantity and/or quality of water you provide to your customers, you are DIRECTED to institute measures to correct the deficiencies in a timely fashion. A written report concerning specific details of the remedial measures to be instituted, as well as an implementation timetable, must be submitted to this Division within thirty (30) calendar days of the date of this correspondence.

The New Jersey Safe Drinking Water Act (N.J.S.A. 58:12A-1 et seq.) provides for substantial monetary penalties for violations of the Act.

Failure to comply with the above in a timely fashion will result in the initiation of enforcement action by this Department. This shall in no way be construed, however, to indicate any exemption on your part from possible penalties for violations indicated by the Compliance Evaluation Inspection, as stated above.

Please direct all correspondence and inquiries to Charles Ziegmont, of my staff, who can be reached at (201) 299-7592 or by letter through this Division.

Very truly yours,



Joan Rogauskas
Acting Supervisor
Northern Bureau of Regional
Enforcement

A18:mv

Enclosure

Form DWR-143
7/81

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
ENFORCEMENT & REGULATORY SERVICES



COMPLIANCE EVALUATION INSPECTION
PUBLIC COMMUNITY WATER SUPPLY

DATE 6/28 + 6/30/

GENERAL INFORMATION

PURVEYOR/ FACILITY	PARSIPPANY - TROY HILLS WATER DEPARTMENT		
FILE LOCATION	PAR-TROY TOWNSHIP / MORRIS COUNTY	PW-ID #	1429001
MAILING ADDRESS	1001 PARSIPPANY BLVD., PARSIPPANY NJ 0705		
ADMIN.	FRANK BOJARSKI	REQUIRED LICENSES	T-1 W-4
BUSINESS TELEPHONE # Admin.	201 263-7099	Licensed Operators:	T-2 W-4

FACILITY DESCRIPTION

SOURCES: descriptions, locations, capacities(mgd): 17 ACTIVE WELLS. See "sheet A"
which is attached

Est Tot Eff Cap: 11.276 M

TREATMENT: source, type, capacities(mgd): GAS CHLORINATION @ ALL WELLS.
ADVANCED 10 lb CAPACITIES

Est Tot Eff Cap: 11.276 M

FINISHED WATER STORAGE: descriptions, locations, capacities(mgd): 9 Storage Tanks Active
See Attached "sheet B"

1.0 MG TANK BEING CONSTRUCTED ON MOUNTAIN WAY

Est Tot Cap: 9.5 MG

EMERGENCY INTERCONNECTIONS: descriptions, available gallonage(mgd):
MOUNTAIN LAKE WATER DEPT 6" LINE @ LAKESIDE RD.
DENVILLE WATER DEPT 6" LINE @ FOXHILL

Est Tot Avail:

AUXILIARY POWER: location, type, capabilities:
RIGHT ANGLE DRIVES @ WELLS 12, 13, 14 & 15
DIESEL GENERATOR @ Well 4 and 8-1, 2, 3 & Booster Field



NJDEP - DIVISION OF WATER RESOURCES
PUBLIC COMMUNITY WATER SUPPLY INSPECTION



Pag

DELIVERY INFORMATION

PLANT DELIVERED WATER (mgd, month, year) Max 7.28 MGD 8/87 Min 5.16 MGD 12/87 Annual 6/87 → 5/88 Average 6.16 MGD

BULK PURCHASES (provider, mgd) SOUTHEAST MORRIS CO. MUA

BULK SALES (customer, mgd) NONE (PROPOSED TO SELL 25 - 3 MGD TO E. HAM)

NUMBER OF SERVICES 12,514 % METERED 100

MUNICIPALITIES SERVED (est. services in each) PAR - TROY TWP (EXCEPT THE SW CORN)

SERVED BY PURCHASING FROM SEMCMUA APPROX 100 HOMES + 3 B/A

TOTAL ESTIMATED POPULATION SERVED 55,000

CURRENT/RECENT WATER RESTRICTIONS NONE

NEW CONSTRUCTION (Project Numbers) ① MTN WAY 1.0 MG STORAGE TANK ② WELL #20 - MAEDA B220K
③ WELL #19 - F-86R POND

DISTRIBUTION MAINS: Sizing 4" (LK MINIMUM) (min) to 16" (max)
Pressures 20 PSI (min) to 175 PSI (max)
Hydrants/Flushing Program 1525 / YEARLY

MONITORING & REPORTING

PARAMETER(S)	FREQUENCY REQUIRED	FREQUENCY PERFORMED
<u>A-280</u>	<u>ELY</u>	<u>5/25/88 MAY 76.224</u>
Coliform	<u>65/MO.</u>	<u>80/MO.</u>
Inorganics	<u>ONCE / 3 YRS.</u>	<u>6/12/88</u>
Nitrate	<u>ONCE / 3 YRS.</u>	<u>6/12/88</u>
Trihalomethanes	<u>ONCE / 90 DAYS</u>	<u>5/12/88</u>
Organics	<u>NA</u>	<u>—</u>
Turbidity	<u>NA</u>	<u>—</u>
<u>RADIO NUCLEIDES</u>	<u>CYCLE / 4 YRS</u>	<u>DUE 1990</u>
<u>SECONDARIES</u>	<u>ONCE / 3 YRS</u>	<u>DUE 9/88</u>

NAME OF LABORATORY ① ICM - RANDOLPH (TMA) CERTIFICATION # 14116

ADDRESS ② PAR - TROY WATER DEPT (COLI) # 14076 ③ Passaic Valley #160

COMPLIANCE EVALUATION

SOURCE DEFICIENCIES WELL #7 is being pumped to waste without a NJDEP PERMIT.

TREATMENT DEFICIENCIES GAS CALORIMATOR AT WELL #9 WAS NOT
PRINTING

P-16



NJDEP - DIVISION OF WATER RESOURCES
PUBLIC COMMUNITY WATER SUPPLY INSPECTION



Page

COMPLIANCE EVALUATION (Continued)

STORAGE AND/OR DISTRIBUTION DEFICIENCIES Hester Road Overflow Pipe Has
Damaged Screen Under-rd mains within system

LICENSING, MONITORING AND/OR REPORTING DEFICIENCIES NONE NOTED

COMPLIANCE SAMPLING VIOLATIONS: NO SAMPLES TAKEN

LOCATION	DATA SOURCE	PARAM	MAX CONTMNT LEVEL	RESULT	LOCATION	DATA SOURCE	PARAM	MAX CONTMNT LEVEL	RESULT

OVERALL COMPLIANCE RATING:

☐ ACCEPTABLE☐ CONDITIONALLY ACCEPTABLE☒ UNACCEPTABLE

NOTICE: YOU ARE REQUIRED TO INFORM THE N.J.D.E.P. IN WRITING OF YOUR ACTUAL OR INTENDED ACTIONS TO COMPLY WITH N.J.S.A. 58:12A-1 ET SEQ. VIA IMPLEMENTATION OF REMEDIAL MEASURES TO CORRECT THE DEFICIENCIES LISTED IN THIS REPORT. FAILURE TO ADEQUATELY RESPOND IN A TIMELY FASHION WILL RENDER YOU LIABLE FOR PENALTIES OF UP TO \$5,000.00 FOR EACH VIOLATION, PURSUANT TO N.J.A.C. 7:10-3.

INSPECTOR: Charles Ziegmont
Signature

CHARLES ZIEGMONT
Name

ENVIRONMENTAL SPECIALIST
Title

NORTHERN
Region

PERSON INTERVIEWED: JACK FOREMAN
Name

ASSISTANT OPERATOR
Title

PAR-TROY WATER DE
Organization

SHEET A

<u>ACTIVE PUMPING STATIONS</u>	<u>LOCATION</u>	<u>WELL MOTOR/PUMP PUMPING RATE WELL CAPACITY</u>	<u>CHLORINE MOTOR/PUMP</u>
Well #1A Pump House Road	In the woods, past the end of Princess Street	100 hp 420 GPM 0.605 MGD	5 hp
Well #3 Vail Road	At the end of Eileen Court, by school and tank	50 hp 350 GPM 0.504 MGD	1.5 hp
Well #4 Parsippany Boulevard	Parsippany Blvd., rear of former Post Office, near Route 46	60 hp 225 GPM 0.324 MGD	1.5 hp
Well #4A Parsippany Boulevard	same as #4	100 hp 900 GPM 1.296 MGD	1.5 hp
Well #7 Halsey Road	East of Jefferson Road	100 hp 500 GPM 0.720 MGD	N/A
Well #8-1, 8-2, and 8-3 South Beverwyck Road (150 hp at booster station at this well field)	Approx. 200' South of Quinby Court on South Beverwyck	15 hp 300 GPM 0.432 MGD 15 hp 400GPM 0.576 MGD 30 hp 600 GPM 0.864 MGD	N/A
Well #9 Homer Street P-18	Between Sparton Avenue and Grecian Street	75 hp 540 GPM 0.778 MGD	2 hp
Well #10 Cherry Hill Road			

SHEET A - PAGE 2

<u>ACTIVE PUMPING STATIONS</u>	<u>LOCATION</u>	<u>WELL MOTOR/PUMP PUMPING RATE WELL CAPACITY</u>	<u>CHLORINE MOTOR/PUMP</u>
Well #11 Troy Meadow Road	Approx. 400' East of Parkside Drive on Troy Meadow Road	60 hp 70 GPM 0.101 MGD	2 hp
Well #12 Fairfield Road	Between Parsippany Blvd., and Mamora Road on Fairfield Rd.	75 hp 300 GPM 0.432 MGD	1.25 hp
Well #13 Marsha Terrace Flowing artesian	Extension of Marsha Terrace	100 hp 425 GPM 0.612 MGD	2 hp
Well #14 Holmdel Road	At end of Sylvan Way, in Prudential Campus	125 hp 700 GPM 1.008 MGD	3 hp
Well #15 Ball Avenue	Between North Beverwyck Road and Condit Street	40 hp 150 GPM 0.216 MGD	2 hp
Well #17 Pump House road	Behind Water Department office, off Pump House Road	100 hp 700 GPM 1.080 MGD	1 hp
Well #18 Ulysses Street	Approx. 300' East of Grecian Street, in same park as well #9	100 hp 750 GPM 1.080 MGD	1 hp

PUMPING STATIONS OUT OF SERVICE

Well #1	Pump House Road
Well #2	Behind Police Station

SHEET A - PAGE 3

PUMPING STATIONS OUT OF SERVICE

Well #5-1
#5-2
#5-3

Entrance at the Ferncrest Apartments approximately 1,500'
West of Route 53. Station is located in the wooded area
of the Ferncrest Apartments.

Well #6

At the end of Elm Avenue

SHEET B

"x" - Tank has cathodic protection system

<u>STORAGE TANKS</u> <u>Name, type and location</u>	<u>CAPACITY (MG)</u>
1. Brooklawn Ground Tank At end of Fairview Place, entrance from Arlington Avenue, off Park Road.	2.0 "x"
2. Hector Road Ground Tank Between Skyview Terrace Road Fernview Road.	1.0
3. Knoll Road Elevated Tank Between homes #580 and #594.	2.0 "x"
4. Lackawanna Elevated Tank In Foxhill Park Industrial Complex off Rt. 46E, behind Esselte Pentaflex.	1.0 "x"
5. Powder Mill South Elevated Tank At top of Continental Road.	0.5 "x"
6. Puddingstone Ground Tank Puddingstone Heights Development on High Ridge Road.	0.5 "x"
7. Route 10 Standpipe Route 10 West, between Rt. 53 and Powder Mill Road.	1.0 "x"
8. Route 287 Elevated Tank Pomeroy Road, between Smith- Road and Webro Road.	1.0 "x"
9. Vail Road Elevated Tank At end of Eileen Court, by school and well #3.	0.5
10. Mountain Way Tank At end of Mountain Way	1.0 "x"

: :



State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
NORTHERN BUREAU OF REGIONAL ENFORCEMENT
1259 ROUTE 46, BUILDING 2
PARSIPPANY, NEW JERSEY 07054

GEORGE G. McCANN, P.E.
DIRECTOR

DIRK C. HOFMAN, P.E.
DEPUTY DIRECTOR

SEP 7 1989

Mr. Dwight Longley, Borough Administrator
Florham Park Borough Hall
111 Ridgedale Avenue
Florham Park, New Jersey 07932

Dear Mrs. Longley:

Re: Compliance Evaluation Inspection
Florham Park Water Department
P.W. - ID No.: 1411001
Munic/County: Florham Park Borough, Morris County

A Compliance Evaluation Inspection of your facility was conducted by a representative of this Division on July 27, 1989.

Your facility received a rating of "ACCEPTABLE". A copy of the completed inspection report form is enclosed for your information. Please address any deficiencies noted therein.

NOTE: Undersized mains exist within your system. All future replacement of these mains and all new mains must be at least 6" in diameter, unless justified by hydraulic analysis and approved by the Department

This Division anticipates your continued cooperation in operating your facilities in a responsible and efficient manner.

Very truly yours,

James Christakos

James Christakos
Environmental Specialist
Ground Water and Safe Drinking
Water Enforcement
Northern Bureau of Regional
Enforcement

A20:dc

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
ENFORCEMENT & REGULATORY SERVICESCOMPLIANCE EVALUATION INSPECTION
PUBLIC COMMUNITY WATER SUPPLYDATE July 27, 1989GENERAL INFORMATION

PURVEYOR/ FACILITY <u>Florham Park Water Department</u>	
FILE LOCATION <u>Florham Park Borough / Morris County</u>	PW-ID # <u>1411001</u>
MAILING ADDRESS <u>111 Ridgedale Ave, Florham Park, N.J. 07932</u>	
ADMIN. <u>Dwight Longley</u>	REQUIRED T - 3 LICENSES W - 4
BUSINESS TELEPHONE # Admin.: <u>377-5800</u> Licensed Operators: T-3 <u>R. Tantiño</u> W-4 <u>R. Tantiño</u>	

FACILITY DESCRIPTIONSOURCES: descriptions, locations, capacities(mgd): Well #1 - Capped and SealedWell #2 - 1000 GPM (1.41 MGD) - on Columbia AvenueWell #3 - 650 GPM (0.936 MGD) - at the Recreation FieldWell #4 - 1300 GPM (1.872 MGD) - on Elm Street Est Tot Eff Cap: 4.248 MGDTREATMENT: source, type, capacities(mgd): All three wells have Gas Chlorination (WRT - capacity of 10⁺ / day, each)Wells 2, 3 and 4 are sequestered with Sodium Hexametaphosphate for manganese.A chlorine detector and a Scott Air Pack is located in the Well Houseof Well #4. Est Tot Eff Cap: 4.248 MGDFINISHED WATER STORAGE: descriptions, locations, capacities(mg): There are two storage tanks.1. 0.25 MG elevated tank at Columbia Turnpike.2. 1.00 MG standpipe at Pollard Avenue.Est Tot Cap: 1.25 MG

EMERGENCY INTERCONNECTIONS: descriptions, available gallonage(mgd):

1. Madison Water Department: 6" - 12" lines - 0.500 MGD2. East Hanover Water Department: 8" lines - 0.500 MGDEst Tot Avail: 1.0 MGD

AUXILIARY POWER: location, type, capabilities:

Well #2 - Propane engine with a right angle drive.Well #3 - Gasoline engine with a right angle drive.Well #4 - Diesel Generator.



N.J. DEPT. OF WATER RESOURCES
PUBLIC COMMUNITY WATER SUPPLY INSPECTION



DELIVERY INFORMATION

PLANT DELIVERED WATER (mgd, month, year) Max <u>July '88</u> <u>1,908 MGD</u>	Min <u>Feb '89</u> <u>0.875 MGD</u>	Annual <u>7/88 - 6/89</u> Average <u>1,209 MGD</u>
BULK PURCHASES (provider, mgd) <u>NONE</u>		
BULK SALES (customer, mgd) <u>NONE</u>		
NUMBER OF SERVICES <u>3,040</u>	% METERED <u>100</u>	
MUNICIPALITIES SERVED (est. services in each) <u>1. Madison - 3 services</u> <u>2. East Hanover - 10 services</u> <u>3. Balance in Florham Park</u>		
TOTAL ESTIMATED POPULATION SERVICED <u>11,579</u>		
CURRENT/RECENT WATER RESTRICTIONS <u>Odd and Even Days - Lawns, Car washing.</u> <u>Since 1982.</u>		
NEW CONSTRUCTION (Project Numbers) <u>Very Little</u>		
DISTRIBUTION MAINS: Sizing <u>4"</u> (min) to <u>12"</u> (max) Pressures <u>55 psi</u> (min) to <u>90 psi</u> (max) Hydrants/Flushing Program <u>~350 hydrants/ once per year</u>		

MONITORING & REPORTING

PARAMETER(S)	FREQUENCY REQUIRED	FREQUENCY PERFORMED
Coliform	13 per month	13 per month
Inorganics	Every three years	Done 2/87; Due 2/90
Nitrate	"	"
Trihalomethanes	Four per year	Done 8/88, 11/88, 2/89, 7/89; Due 9/89, 12/89
Organics	"	"
Turbidity	"	"
A-280	Twice per year	Done 11/88, 3/89; Due 12/89
Secondary	Every three years	Done 2/87; Due 2/90
Radiochemical	Every four years - Q+Y	Done 1986; Due 1990

NAME OF LABORATORY Madison Health Dept Environmental Profile Labs. CERTIFICATION # 14049/15526
ADDRESS Madison, New Jersey Toms River, N.J.

COMPLIANCE EVALUATION

SOURCE DEFICIENCIES NONE

TREATMENT DEFICIENCIES NONE



COMPLIANCE EVALUATION (Continued)

STORAGE AND/OR DISTRIBUTION DEFICIENCIES Undersized mains exist within
your system.

LICENSING, MONITORING AND/OR REPORTING DEFICIENCIES NONE

COMPLIANCE SAMPLING VIOLATIONS: No Samples Taken

LOCATION	DATA SOURCE	PARAM	MAX CONTMNT LEVEL	RESULT	LOCATION	DATA SOURCE	PARAM	MAX CONTMNT LEVEL	RESULT

OVERALL COMPLIANCE RATING:

☒ ACCEPTABLE

☐ CONDITIONALLY ACCEPTABLE

☐ UNACCEPTABLE

NOTICE: YOU ARE REQUIRED TO INFORM THE N.J.D.E.P. IN WRITING OF YOUR ACTUAL OR INTENDED ACTIONS TO COMPLY WITH N.J.S.A. 58:12A-1 ET SEQ. VIA IMPLEMENTATION OF REMEDIAL MEASURES TO CORRECT THE DEFICIENCIES LISTED IN THIS REPORT. FAILURE TO ADEQUATELY RESPOND IN A TIMELY FASHION WILL RENDER YOU LIABLE FOR PENALTIES OF UP TO \$5,000.00 FOR EACH VIOLATION, PURSUANT TO N.J.A.C. 7:10-3.

INSPECTOR: James Christakos
Signature

James Christakos
Name

Environmental Specialist
Title

Northern
Region

PERSON INTERVIEWED: Rosario Tantiello
Name

Licensed Operator
Title

Florham Park Water Dept
Organization

SOIL AND GROUNDWATER REMEDIAL INVESTIGATION
PHASE 1 RESULTS

LITTON INDUSTRIES, INC. - AIRTRON DIVISION
Hanover Township, New Jersey

By .

CONVERSE ENVIRONMENTAL EAST

24 November 1987

Project No. 87-47400-01

Cover - 3-dimensional fish net diagram of the water table surface in the upper flow system showing the drawdown configuration due to pumping of Mennen Production Well #1. View is from the southwest looking towards the Mennen Well and Airtron beyond.

Converse Environmental East

Q-1

to divert surface runoff. The NJDEP state permit number was permanently placed on the protective casing of each well. Monitoring wells MW-201 and MW-206 were constructed as flush mount completions using America, Inc. locking meter boxes.

Upon completion, each deep monitoring well was developed by air methods, and by hand bailing in each of the shallow wells. All the wells contained water which was initially very turbid. Development of each well continued until the discharge became clear and until conductivity measurements stabilized.

A dedicated Well Wizard P-1201 bladder pump, with PT-5100 teflon-lined polyethylene tubing, was installed in each new and existing monitoring well. Due to the large volume of water that is necessary to purge from the 3 USGS wells, a Grundfos SP-4-6, 115 volt, 1/2 horsepower submersible pump was also installed in each of these wells.

Following construction, the elevations and locations of the monitoring wells were surveyed by a New Jersey licensed surveyor from Recon, Inc. of Whippany, New Jersey. As of this report, the horizontal coordinates of each well location is pending.

HYDROGEOLOGY

General

The Airtron site and surrounding area is underlain by two general hydrogeologic units. These consist of bedrock aquifers, and the overlying Pleistocene glacial deposits.

Bedrock

The Airtron facility is located within the far western portion of the Piedmont Physiographic Province in northern New Jersey. In the vicinity of Hanover Township, New Jersey, the rocks which underlie the Piedmont Province consist entirely of consolidated sedimentary deposits of the Boonton member of the Brunswick Formation. This formation is composed of Triassic sandstone with interbedded shales.

Approximately 2000 feet west of the site, the Brunswick Formation is truncated by the Great Border Fault which forms the actual geologic boundary between the Piedmont and the Highland Physiographic Provinces. The Whippany River, located west of the Airtron site, locally outlines the trend of this fault zone. Along this north-south trending fault, sedimentary rocks of the Brunswick Formation lie against Precambrian crystalline rocks. These crystalline rocks consist of a variety of hard gneisses, granites and schists.

The bedrock surface forms a broad trough which locally trends in a general north-south direction. The Airtron site is located along the approximate axis of this trough, with outcrops of Precambrian crystalline rocks and sediments of the Brunswick Formation exposed at the surface about 2500 feet to the west and east of the site, respectively. This depression in the bedrock surface is filled with varying thicknesses of sediments deposited during the Wisconsin glaciation.

None of the borings drilled for this investigation penetrated the underlying Brunswick Formation. The boring logs from this study indicate a depth to bedrock of greater than 138

feet. Available well logs from the surrounding area indicate that the thickness of glacial soils overlying bedrock is about 190 feet at a well located approximately 1300 feet east of the site, and about 153 feet at a well located approximately 500 feet west of the site.

Because none of the bedrock strata were penetrated by any of the borings drilled for this investigation, and because it is believed they are not hydrologically relevant to the results of this study, the hydrologic properties of the bedrock units are not detailed in this report.

Pleistocene Glacial Deposits

The glacial sediments underlying the Airtron site can be divided into at least 5 general hydrogeologic units. These consist of an upper unsaturated zone, an upper unconfined aquifer, an upper fine-grained aquitard, a lower confined aquifer, and a lower fine-grained aquitard.

Upper Unsaturated Zone

The unsaturated zone under the study area can be subdivided into at least two separate geologic units: a relatively low permeability surface till and unsaturated outwash sands above the upper aquifer.

We conducted a field reconnaissance, upgradient of MW-206, searching for an additional source. Inspection of the wooded area adjacent to MW-205 revealed the presence of an old, abandoned landfill, as shown on Drawing 7. This landfill is located several hundred feet to the southeast of monitoring well MW-205 and occupies an area of about 2 acres. Most of the material appears to have been burned as there was abundant ash and cinders present. In the far western portion of the landfill was at least 1/2 dozen 55 gallon drums sticking out of the landfill; one of which was oozing a thick, black oily substance.

Because the landfill was subsequently determined to be entirely within AT&T and Fabricated Plastics properties, no further investigation was undertaken. Although the contribution of volatile organics to the groundwater from this area has not been investigated, the location of the landfill almost exactly upgradient from monitoring well MW-206 makes it highly suspect. The presence of low levels of aliphatic volatile compounds in monitoring well MW-205 could be due to this well being located along the northern edge of a volatile plume which is migrating towards monitoring wells MW-206 and USGS-1, on its way towards the Mennen pumping well.

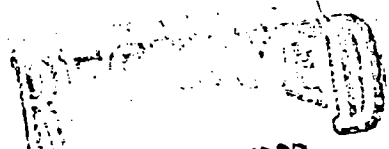
Based on the information discussed in this section of the report, 3 groundwater plumes with very similar chemistries have been identified. The suspected source areas and generalized plume boundaries are presented on Drawing 7. The movement of these plumes are all being controlled by gradients created by the pumping of the Mennen production well. This is also to say that contaminated groundwater within these plumes will ultimately be captured and discharged by the Mennen well.

Brady/FYD
AD
CC

Let's protect our earth



Lurko



APR 21 1989

State of New Jersey
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
BUREAU OF WASTE MANAGEMENT

CN 029

TRENTON, NEW JERSEY 08625

APR 20 1989

GEORGE G. McCANN, P.E.
DIRECTOR

DIRK C. HOFMAN, P.E.
DEPUTY DIRECTOR

M E M O R A N D U M

Rub

TO: Chris Mallery through Robert Plumb, Assistant Chief, Northern Bureau of Regional Enforcement, DWR

FROM: *AB* Robert A. Gallagher through David Muscalo, Supervisor, Bureau of Ground-Water Pollution Assessment, DWR *DM*

SUBJECT: Airtron Division of Litton Industries, Hanover Township, Morris County - Review of "Soil and Ground Water Remedial Investigation" Report

Summary

The subject document has been reviewed by BGWPA and the reported conclusions found to be unacceptable. The horizontal extent of ground-water of pollution which has migrated offsite has not been delineated. The report does not conclusively prove that the production well located at Mennen Corporation captures all pollution emanating from the subject site. The pollution sources (lagoons) at Airtron Division of Litton Industries (AL) have not been sufficiently investigated/remediated. Finally, AL has not applied for the appropriate NJPDES-DGW.

Background

Enforcement action at the subject site was initiated in 1979 as a result of a site inspection which revealed NJPDES violations and the improper use of unlined sludge beds (lagoons). Sampling of existing production wells and monitor wells installed in 1980 and 1981 confirmed that the site was a source area for ground-water pollution by volatile-organic compounds (VOCs). Pollution of a neighboring production well by VOCs (Mennen Corp. see attachment No. 1a & b) was also confirmed. Subsequent analyses of monitoring data revealed that the partial excavation of the lagoons conducted as a remedial action has not been effective

in eliminating sources of ground-water pollution. Consequently, a Directive was issued by NBRE to AL on Dec. 11, 1986 requiring that a remedial investigation be conducted at the site. The subject document presents the results of the investigation performed by AL's consultant, Converse Environmental Consultants, during the period of April-November 1986. Twenty-two soil borings and six additional monitor wells were installed at this time.

Potential sources of pollution at the AL site include: five former lagoons; a hazardous-waste-storage area, and discharges to a stream at the rear of the site. The major volatile organic pollutants identified in ground-water samples collected at the site include (in order of decreasing concentration): trichloroethylene (TCE), tetrachloroethylene (PCE), and trans-1,2-dichloroethene. Other pollutants identified in either sludge or wastewater samples from the site include: cyanide, arsenic, cadmium, chromium, copper, nickel, silver, and zinc.

Hydrogeology

The AL site is located in the Piedmont physiographic province of New Jersey. The site is underlain by at least 138 feet of unconsolidated sediments. None of the borings completed at the site encountered bedrock. The sediments are underlain by bedrock reported by Lyttle and Epstein (1987, Geologic Map of the Newark 1 X 2 Quadrangle, U.S.G.S. Map I-1715) to be the Boonton Formation of the Brunswick Group. The bedrock was not sampled in this investigation. Topography slopes generally to the east-southeast from AL toward the Whippany River.

Two aquifers in the unconsolidated deposits were encountered during investigations at the site. The deeper of the two aquifers is located at approximately 120 to 130 feet below ground surface and is confined. Elevations of the potentiometric surface of this aquifer when compared with those of the shallow aquifer indicate upward leakage of confined ground water. The water table in the shallow aquifer is encountered at depths ranging from approximately 40 to 60 feet below ground surface. The saturated thickness of this aquifer ranges from approximately 25 to 50 feet. The average hydraulic gradient in the shallow aquifer when the Mennen production well is pumping, is approximately 0.02. Locally, a shallow, perched water table may be encountered. Perched water was noted in borings B-117 and 1M at depths of less than 10 feet.

Comments/Conclusions

1. The Mennen production well is reported to be capturing

analyzed for Priority Pollutant Metals. The analytical results (Attachment No.4) show concentrations of arsenic and cadmium above NJDEP guidelines for soils.

12. AL has a NJPDES DSW permit (No. NJ0025739) for discharge to this stream. Violations of the permit for excessive concentrations of arsenic have been reported.
13. Relatively high concentrations of cadmium were reported in sludge samples from the lagoons (Attachment No.1) at AL.
14. None of the borings installed during this phase investigation at AL were completed through the lagoon sediments. Consequently, the vertical distribution of pollutants beneath the lagoons is unknown. These data are necessary for proper source remediation.
15. The DWR "Field Procedures Manual for Water Data Acquisition" states: bladder pumps may not be used "to collect samples for volatile organic analysis due to the pressure gradients to which the sample is exposed" (p. I-45). The subject report states indicates that dedicated bladder pumps were installed in most of the monitor wells and used for ground-water sampling and purging.
16. A production well at the Mennen facility intercepts polluted ground water emanating from the AL site. Ground water from this production well is used as non-contact cooling water and discharged to surface water.
17. Ground-water in the deeper aquifer has been sampled and analyzed; no detectable levels of VOC pollutants have been found.

Recommendations

1. AL should initiate recovery and treatment/disposal of polluted ground water below the subject site.
2. AL should define the offsite extent of polluted ground water.
3. AL should initiate recovery and treatment/disposal of all polluted ground water emanating from the subject site.
4. AL should apply for a NJPDES-DGW permit.
5. AL should conduct a soil and stream sediment sampling

program investigate potential metals contamination.

6. AL should investigate soil contamination by VOCs in and below the lagoons.
7. Future ground-water samples must be collected by bailer.
8. Appropriate revisions should be made to Mennen's NJPDES-DSW permit. ✓

I will continue to assist in this matter as needed. If you have any questions, please call (609)292-0668.

RAG:kdi

cc: Arnold Schiffman, Ground Water Quality Management, DWR
Steven Spayd, BGWPA
Dennis Hart, Bureau of Case Management, DHSM
Stephen Johnson, Bureau of Ground-Water Discharge Control, DWR
Paul Kurisko, Industrial Permits, DWR
file

Chem-25
Sept. 75

NEW JERSEY STATE DEPARTMENT OF HEALTH
STREAM OR WASTE WATER ANALYSIS

Time & Date Received _____
By Labs _____
Lab. No. _____

FIELD INFORMATION

PLEASE TYPE OR PRINT
WITH BALLPOINT PEN

Sample No. C 33679

Municipality MORRIS PLAINS

Plant LITTON IND - AIRTRON DIV

Stream _____

Location HANOVER RD

Description and Remarks: WELL BY HANOVER RD #1

MS & E Date of Collection APRIL 8 19 80

Hour 11 A.M. ☒ P.M. ☐

Composite Period GRAB Interval _____

Collected by KING - REUTER

Residual Chlorine: _____
Immediate _____

Developed _____

Flow Rate _____

Temperature _____

ITEMS CIRCLED BELOW ARE UNSATISFACTORY

Dilutions Requested
(Bacteriological)

10	1	10 ⁻¹	10 ⁻²	10 ⁻³	10 ⁻⁴	10 ⁻⁵	10 ⁻⁶

LABORATORY RESULTS
BACTERIOLOGICAL

Coliform MPN/100 ml. _____ (Confirmed Test); Fecal Coliform MPN/100 ml. _____

Fecal Streptococci: MPN/100 ml. _____ Other _____

CHEMICAL AND PHYSICAL ANALYSES (mgs./liter, unless otherwise noted)

Color (units)	Chloride	Sulfate	Other Determinations
Odor (cold)	Suspended Solids	Grease & Oil	<u>AMMONIUM</u>
Turbidity (units)	Ash	<u>Cyanide</u>	<u>SILVER 0.010 K</u>
pH	Total Solids	<u>Chromium Total 0.010 K</u>	<u>NICKEL 0.010 K</u>
Acidity to pH 4	Ash	<u>Chromium Hex. 0.005 K</u>	<u>VOLATILE ORG SOLS / pH</u>
Alkalinity to pH 4	Total PO ₄	Ortho - PO ₄	<u>(TCE)</u>
Nitrite N	MBAS	<u>Copper 0.005 K</u>	<u>CADMIUM 0.002</u>
Nitrate N	Phenols	Lead	<u>trichloroethylene</u>
Ammonia N	COD	Arsenic	<u>34.500</u>
Total Kjel. N	Iron	<u>Zinc 0.011</u>	<u>tetrachloroethylene</u>

BIOCHEMICAL OXYGEN DEMAND (mgs./liter)

ND = NON-DETECTABLE: I. E. BELOW
DETECTABLE LIMITS RE METHOD # 4

Field D.O.		Lab. D.O.			Seed Required:				Yes		APR 10 1980	
Sample Conc. %	PLEASE CIRCLE	0.1	0.2	0.5	1.0	2.0	5.0	10	25	50	75	100
BOD ₅									REPORT SUBMITTED BY: [illegible]			

REPORT SUBMITTED
DIV. OF LABORATORIES & EPID.

W.H. Chem-25
Sept. 75

NEW JERSEY STATE DEPARTMENT OF HEALTH
SEWAGE TREATMENT PLANT
S. REAM OR WASTEWATER ANALYSIS

Time & Date Received _____
By Labs _____
Lab. No. _____

FIELD INFORMATION

PLEASE TYPE OR PRINT
WITH BALLPOINT PEN

Sample No. C 33680

Municipality Morris Plains

Plant MENNAN

Stream _____

Location HANOVER ROAD

Description and Remarks: WELL IN FRONT OF BLDG MENNAN #1

Date of Collection April 8 19 80
Hour 12:25 A.M. _____ P.M. ✓

Composite Period _____ Interval _____

Collected by King, Reuter
Residual Chlorine: _____

Immediate _____

Developed _____

Flow Rate _____

Temperature _____

ITEMS CIRCLED BELOW ARE UNSATISFACTORY

Dilutions Requested
(Bacteriological)

10	1	10 ⁻¹	10 ⁻²	10 ⁻³	10 ⁻⁴	10 ⁻⁵	10 ⁻⁶

LABORATORY RESULTS
BACTERIOLOGICAL

Coliform MPN/100 ml. _____ (Confirmed Test); Fecal Coliform MPN/100 ml. _____

Fecal Streptococci: MPN/100 ml. _____ Other _____

CHEMICAL AND PHYSICAL ANALYSES (mgs./liter, unless otherwise noted)

Color (units)	Chloride	Sulfate	Other Determinations
Odor (cold)	Suspended Solids	Grease & Oil	<u>Silver 0.010 K</u>
Turbidity (units)	Ash	Cyanide	<u>CADMIUM 0.001 K</u>
<u>pH</u>	Total Solids	<u>Chromium Total 0.010 K</u>	<u>NICKEL 0.010 K</u>
Acidity to pH 4	Ash	<u>Chromium Hex. 0.005 K</u>	<u>VOLATILE ORG SCRN</u>
Alkalinity to pH 4	Total PO ₄	Ortho - PO ₄	
Nitrite N	MBAS	<u>Copper 0.010</u>	<u>trichloroethylene</u>
Nitrate N	Phenols	Lead	<u>1920</u>
Ammonia N	COD	Arsenic	<u>trichloroethylene</u>
Total Kjcl. N	Iron	<u>Zinc 0.018</u>	<u>50</u>

ND = NON-DETECTABLE: I. E. BELOW
DETECTABLE LIMITS SEE MEMO # 4

BIOCHEMICAL OXYGEN DEMAND (mgs./liter)

Field D.O.	Lab. D.O.	Seed Required:	Yes	No
Sample Conc. %	PLEASE CIRCLE	0.1 0.2 0.5 1.0 2.0 5.0 10 25	REPORT SUBMITTED 75	100
BOD ₅			DIV. OF LABORATORIES & EPI.	

Chem-25
Sept. 75

NEW JERSEY STATE DEPARTMENT OF HEALTH
STREAM OR WASTEWATER ANALYSIS

Time & Date Received _____
By Labs _____
Lab. No. _____

FIELD INFORMATION

PLEASE TYPE OR PRINT
WITH BALLPOINT PEN

Sample No. C33681

Municipality MORRIS PLAINS

Plant LITTON IND - GILTRON DIV

Stream _____

Location HANOVER RD

Description and Remarks: WELL BY BASEBALL FIELD #2

Date of Collection APRIL 8 1980

Hour 12:45 A.M. _____ P.M. 1

Composite Period LEAD Interval _____

Collected by KING - REUTER

Residual Chlorine: _____

Immediate _____

Developed _____

Flow Rate _____

Temperature _____

ITEMS CIRCLED BELOW ARE UNSATISFACTORY

Dilutions Requested
(Bacteriological)

10	1	10 ⁻¹	10 ⁻²	10 ⁻³	10 ⁻⁴	10 ⁻⁵	10 ⁻⁶

LABORATORY RESULTS
BACTERIOLOGICAL

Coliform MPN/100 ml. _____ (Confirmed Test); Fecal Coliform MPN/100 ml. _____

Fecal Streptococci: MPN/100 ml. _____ Other _____

CHEMICAL AND PHYSICAL ANALYSES (mgs./liter, unless otherwise noted)

Color (units)	Chloride	Sulfate	Other Determinations
Odor (cold)	Suspended Solids	Grease & Oil	✓ SILVER 0.010 K
Turbidity (units)	Ash	✓ Cyanide	✓ CADMIUM 0.002
pH	Total Solids	✓ Chromium Total 0.010 K	✓ NICKEL 0.010 K
Acidity to pH 4	Ash	✓ Chromium Hex. 0.005 K	✓ VOLATILE ORG. SOLN. 0.005 K
Alkalinity to pH 4	Total PO ₄	Ortho - PO ₄	(TCE) 0.005 K
Nitrite N	MBAS	Copper 0.005 K	trichloroethylene
Nitrate N	Phenols	Lead	215
Ammonia N	COD	Arsenic	
Total Kjell. N	Iron	Zinc 0.014	

APR 24 1980

BIOCHEMICAL OXYGEN DEMAND (mgs./liter)

Field D.O.		Lab. D.O.			Seed Required: Yes								REPORT SUBMITTED BY NO. OF LABORATORIES & EPID.
Sample Conc. %	PLEASE CIRCLE	0.1	0.2	0.5	1.0	2.0	5.0	10	25	50	75	100	
BOD ₅													

FIELD INFORMATION

PLEASE TYPE OR PRINT
WITH BALLPOINT PEN

Sample No. C 33678

Municipality MORRIS PLAINS

Plant LITTON IND - FORTRESS DIV

Stream _____

Location HANOVER RD

Description and Remarks: SLUDGE LAGOONS

Date of Collection APR 14 8 19 80

Hour 11:15 A.M. ☒ P.M. _____

Composite Period GRAB Interval _____

Collected by KING - REUTER

Residual Chlorine:
Immediate _____

Developed _____

Flow Rate _____

Temperature _____

ITEMS CIRCLED BELOW ARE UNSATISFACTORY

Dilutions Requested
(Bacteriological)

10	1	10 ⁻¹	10 ⁻²	10 ⁻³	10 ⁻⁴	10 ⁻⁵	10 ⁻⁶

LABORATORY RESULTS
BACTERIOLOGICAL

Coliform MPN/100 ml. _____ (Confirmed Test); Fecal Coliform MPN/100 ml. _____

Fecal Streptococci:MPN/100 ml. _____ Other _____

CHEMICAL AND PHYSICAL ANALYSES (mgs./liter, unless otherwise noted)

Color (units)	Chloride	Sulfate	Other Determinations
Odor (cold)	Suspended Solids	Grease & Oil	<u>SILVER</u> 0.333
Turbidity (units)	Ash	Cyanide 0.303	<u>CADMIUM</u> 0.221
<input checked="" type="checkbox"/> pH	Total Solids	Chromium Total 0.818	<u>NICKEL</u> 6.050
Acidity to pH 4	Ash	Chromium Hex. 0.007	
Alkalinity to pH 4	Total PO ₄	Ortho - PO ₄	<u>V.O. SCAN</u> / ppb
Nitrite N	MBAS	Copper 5.342	<u>trichloroethylene</u>
Nitrate N	Phenols	Lead	1760
Ammonia N	<input checked="" type="checkbox"/> COD 354	Arsenic	2 = NON-DETECTABLE 1 & BELOW
Total Kjel. N	Iron	Zinc 0.903	DETECTABLE LIMITS AS NOTED #

APR 24 1980

BIOCHEMICAL OXYGEN DEMAND (mgs./liter)

Field D.O.		Lab. D.O.			Seed Required:			Yes	REPORT SUBMITTED			
Sample Conc. %	PLEASE CIRCLE	0.1	0.2	0.5	1.0	2.0	5.0	10	25	50	75	100
BOD ₅												

Chem-25
Sept. 75

NEW JERSEY STATE DEPARTMENT OF HEALTH
WATER OR WASTEWATER ANALYSIS

Time & Date Received _____
By Labs _____
Lab. No. _____

FIELD INFORMATION

PLEASE TYPE OR PRINT
WITH BALLPOINT PEN

Date of Collection 4/30/80 19____
Hour 10:45 A.M. P.M. _____

Sample No. 33682

Composite Period Grab Interval _____

Municipality MORRIS PLAINS

Collected by Donna Hamilton, King
Residual Chlorine: _____
Immediate _____

Plant Hutton Airton

Developed _____

Stream TRIB OF WHIPPANY RIVER

Flow Rate Unknown

Location E HANOVER RD

Temperature 12°C

Description and Remarks: Discharge 001, Process water + storm runoff
green color - POND AT REAR OF PROPERTY, Cloudy day

ITEMS CIRCLED BELOW ARE UNSATISFACTORY

Dilutions Requested
(Bacteriological)

10	1	10 ⁻¹	10 ⁻²	10 ⁻³	10 ⁻⁴	10 ⁻⁵	10 ⁻⁶

LABORATORY RESULTS
BACTERIOLOGICAL

Coliform MPN/100 ml. _____ (Confirmed Test); Fecal Coliform MPN/100 ml. _____

Fecal Streptococci: MPN/100 ml. _____ Other _____

CHEMICAL AND PHYSICAL ANALYSES (mgs./liter, unless otherwise noted)

Color (units)	✓ Chloride <u>15</u>	✓ Sulfate <u>92</u>	Other Determinations
Odor (cold)	✓ Suspended Solids <u>16</u>	✓ Grease & Oil <u>5. K</u>	✓ SILVER <u>0.010</u>
Turbidity (units)	✓ Ash <u>8</u>	✓ Cyanide <u>0.006</u>	✓ NICKEL <u>0.018</u>
✓ pH <u>8.8</u>	✓ Total Solids <u>256</u>	✓ Chromium Total <u>0.069</u>	✓ CADMIUM <u>0.003</u>
Acidity to pH 4	✓ Ash <u>134</u>	✓ Chromium Hex. <u>0.005 K</u>	✓ ALUMINUM <u>0.940</u>
✓ Alkalinity to pH <u>10.6</u> <u>5</u>	✓ Total PO ₄ <u>0.30</u>	✓ Ortho - PO ₄ <u>0.15</u>	✓ V.O. SCAN (GC) <u>25 ppb K</u>
✓ Nitrite N <u>0.047</u>	✓ MBAS	✓ Copper <u>0.150</u>	✓ Fluoride <u>0.7 J</u>
✓ Nitrate N <u>5.2</u>	✓ Phenols <u>0.019</u>	✓ Lead <u>0.013</u>	
✓ Ammonia N <u>0.20</u>	✓ COD <u>16</u>	Arsenic	
✓ Total Kj. N <u>0.58</u>	Iron	✓ Zinc <u>0.059</u>	ND = NON-DETECTABLE; I. E. BELOW DETECTABLE LIMITS RE. ANAL. # 4

BIOCHEMICAL OXYGEN DEMAND (mgs./liter)

JUN 3 1980

Field D.O.		Lab. D.O.			Seed Required:					Yes	REPORT SUBMITTED		
Sample Conc. %	PLEASE CIRCLE	0.1	0.2	0.5	1.0	2.0	5.0	10	25	DIV. OF LABORATORIES & EPID.	50	75	100
BOD ₅													

NEV RSEY STATE DEPARTMENT OF HEALTH
STREAM OR WASTEWATER ANALYSIS

Time & Date Received _____
By Labs _____
Lab. No. _____

PLEASE TYPE OR PRINT
WITH BALLPOINT PEN

FIELD INFORMATION

Sample No. 33686

Municipality MORRIS PLAINS

Plant LITTON AIRTRON

Stream —

Location E. HANOVER RD

Description and Remarks: SLUDGE LAGOON #2

Date of Collection April 30 19 80

Hour 12:15 A.M. (P.M.)

Composite Period GRAB Interval —

Collected by HAMILTON, KING

Residual Chlorine: Immediate —

Developed —

Flow Rate Unknown

Temperature 12°C

sample taken near bottom

ITEMS CIRCLED BELOW ARE UNSATISFACTORY

Dilutions Requested
(Bacteriological)

10	1	10.1	10.2	10.3	10.4	10.5	10.6

LABORATORY RESULTS
BACTERIOLOGICAL

Coliform MPN/100 ml. _____ (Confirmed Test); Fecal Coliform MPN/100 ml. _____

Fecal Streptococci:MPN/100 ml. _____ Other _____

CHEMICAL AND PHYSICAL ANALYSES (mgs./liter, unless otherwise noted)

Color (units)	✓	Chloride	505	✓	Sulfate	132.	Other Determinations
Odor (cold)	✓	Suspended Solids	1095	✓	Grease & Oil	5. K	✓ SILVER 0.197
Turbidity (units)	✓	Ash	8980	✓	Cyanide	9.854	✓ NICKEL 43.40
✓ pH	7.1	Total Solids	19886	✓	Chromium Total	494.0	✓ CADMIUM 0.018
Acidity to pH 4	✓	Ash	16740	✓	Chromium Hex.	0.005 K	✓ ALUMINUM 440.00
✓ Alkalinity to pH 4	980. J	Total PO ₄	400.	✓	Ortho - PO ₄	349. J	✓ VLO-SCAN (GL)
✓ Nitrite N	8.5 J	MBAS		✓	Copper	420.0	✓ Fluoride 201.6
✓ Nitrate N	440.	Phenols	0.824	✓	Lead	0.010 K	✓ TRICHLOROETHYLENE
✓ Ammonia N	7.9	COD	2666		Arsenic		50,000 ppb L
✓ Total Kjel. N	23.2 J	Iron		✓	Zinc	139.24	

ND = NOT DETECTABLE; I. E. BELOW
DETECTABLE LIMITS RE METHOD # 4

BIOCHEMICAL OXYGEN DEMAND (mgs./liter)

MAY 30 1980

Field D.O.	Lab. D.O.	Seed Required:								Yes	No
Sample Conc. %	PLEASE CIRCLE	0.1	0.2	0.5	1.0	2.0	5.0	10	25		REPORT SUBMITTED
BOD ₅											DIV. OF LABORATORIES & EMIS

NEW JERSEY STATE DEPARTMENT OF HEALTH
STREAM OR WASTEWATER ANALYSIS

Time & Date Received _____
By Labs _____
Lab. No. _____

FIELD INFORMATION

PLEASE TYPE OR PRINT
WITH BALLPOINT PEN

Sample No. C 3367P

Municipality MORRIS PLAINS

Plant LITTON IND - AIRTRON DIV

Stream _____

Location HANOVER RD

Description and Remarks: SLUDGE LABS

Date of Collection APRIL 8 19 80

Hour 11:15 A.M. ☒ P.M. ☐

Composite Period GRAB Interval _____

Collected by KING - REVER

Residual Chlorine: _____
Immediate _____

Developed _____

Flow Rate _____

Temperature _____

ITEMS CIRCLED BELOW ARE UNSATISFACTORY

Dilutions Requested
(Bacteriological)

10	1	10 ⁻¹	10 ⁻²	10 ⁻³	10 ⁻⁴	10 ⁻⁵	10 ⁻⁶

LABORATORY RESULTS

BACTERIOLOGICAL

Coliform MPN/100 ml. _____ (Confirmed Test); Fecal Coliform MPN/100 ml. _____

Fecal Streptococci: MPN/100 ml. _____ Other _____

CHEMICAL AND PHYSICAL ANALYSES (mgs./liter, unless otherwise noted)

Color (units)	Chloride	Sulfate	Other Determinations
Odor (cold)	Suspended Solids	Grease & Oil	<u>SILVER 0.333</u>
Turbidity (units)	Ash	Cyanide <u>0.303</u>	<u>CADMIUM 0.221</u>
<input checked="" type="checkbox"/> pH	Total Solids	Chromium Total <u>0.818</u>	<u>NICKEL 6.050</u>
Acidity to pH 4	Ash	Chromium Hex. <u>0.007</u>	
Alkalinity to pH 4	Total PO ₄	Ortho - PO ₄	<u>V.O. SCAN / ppb</u>
Nitrite N	MBAS	Copper <u>5.342</u>	<u>TRICHLOROETHYLENE</u>
Nitrate N	Phenols	Lead	<u>1760</u>
Ammonia N	<input checked="" type="checkbox"/> COD <u>354</u>	Arsenic	<u>3 = NON-DETECTABLE I.E. BELOW</u>
Total Kj. N	Iron	Zinc <u>0.903</u>	<u>DETECTABLE LIMITS RE MEMO # 4</u>

APR 24 1980

BIOCHEMICAL OXYGEN DEMAND (mgs./liter)

REPORT SUBMITTED

Field D.O.		Lab. D.O.			Seed Required:			Yes	Giv. No. of Laboratories & Epid.			
Sample Conc. %	PLEASE CIRCLE	0.1	0.2	0.5	1.0	2.0	5.0	10	25	50	75	100
BOD ₅												

CHAIN OF CUSTODY RECORD

ENVIRONMENTAL PROTECTION AGENCY - REGION II
SURVEILLANCE & ANALYSIS DIVISION
EDISON, NEW JERSEY 08817

RECEIVED

DEC 31 11 04 AM '80

NJ DEPT. OF ENVIRONMENTAL
DIV. WATER RESOURCES
MS&E

Name of Unit and Address:

Sample Number	Number of Containers	Description of Samples
C05730	3	VO samples - well # 1
C05731	3	VO samples - well # 2
C05728	5	VO samples, cyanide, metals - well # 4
C05729	5	VO samples, cyanide, metals - well # 5

ND = NON-DETECTABLE; I. E. BELOW
DETECTABLE LIMITS RE MEMO # 4

DEC 30 1980

REPORT SUBMITTED
DIV. OF LABORATORIES & EHD

Person Assuming Responsibility for Sample:

Albert A. Cianciulli

Time Date
8:45 11-19-80

Sample Number	Relinquished By:	Received By:	Time	Date	Reason for Change of Custody
All above	Albert A. Cianciulli	J M Walker	9:37	11/19/80	Lab Analysis
All above	J M Walker	maurice Hyl	10:25	11/19/80	V.O. Scan
5728-29	J M Walker	Art de Lott	9:45	11/19/80	Cyanide, AL
5728-29	J M Walker	S Freeman	10:25	11/19/80	Cd, Cr, Cu, Ni, Pb, Zn, Hg, Fe

BACT. LAB NO. _____
DATE REC'D. _____
BOTTLE NO. C05730
DATE REC'D. _____
STORET ENT. _____
READ _____

[illegible]

BMKS.

- [illegible]

Part 3 (Pink) - Water Resources Copy (For Transmission).
Part 4 (Yellow) - Bacteriology Copy

T-2

BACT. LAB NO. _____
DATE REC'D. _____
BOTTLE NO. C05731
DATE REC'D. _____
STORET ENT. _____
READ _____

MUNICIPALITY <i>Morris Co.</i>	COUNTY <i>HANDOVER TWP</i>	STREAM
FACILITY <i>Litton - Airtron</i>	LOCATION <i>HANDOVER RVE</i>	
REPRESENTATIVE <i>FK</i>	TITLE	COLL NAME <i>Giancarli - mennen</i>
REMARKS <i>well # 2</i>		

HOUR

[illegible]

RATKS

<input type="checkbox"/> Water Temp °C	P10,						
<input type="checkbox"/> D.O.-Winkler	P300,						
<input type="checkbox"/> D.O.-Probe	P299,						
<input type="checkbox"/> pH (Field)	P400,						
<input type="checkbox"/> Sample Depth-ft.	P3,						
<input type="checkbox"/> Gage Height-ft.	P65,						
<input type="checkbox"/> Spec. Cond. @ 25 °C	P95,						
<input type="checkbox"/> Salinity ‰	P480,						
<input type="checkbox"/> Tide Stage	P70211,						

[illegible]

Fecal Coliform			-1	-2	-3	-4	-5	-6
Total Coliform	10	1	10	10	10	10	10	10

Fecal Streptococci	10	1	-1	-2	-3	-4	-5	-6
	10	10	10	10	10	10	10	10

Fecal coli ☐ MPN P31615, ☐ MF P31613,

--	--	--	--	--	--

☐ Fecal Strept
MPN (100 ml) - P31677,

--	--	--	--	--

☐ Tot coli
MPN
/100 ml

P31505,

--	--	--	--	--

INITIAL D.O. (lab.) _____ SAMPLE
SEED YES ☐ NO ☐

CONC. %			
BOD			

☐ BOD ☐ 5-DAY P310,

--	--	--	--	--	--

☐ 6-DAY P312,

--	--	--	--	--	--

TO (NAME)...

DATE	TIME	CHARACTER OF INCIDENT FROM (NAME)	TO (NAME)
			NO - NON-DETECTABLE I. E. BELOW
			DETECTABLE LIMITS RE WING # 4
			DEC 30 1980

Part 3 (Pink) ~~REPORT~~ ^{Water Resources} Copy (For Transmission)
Part 4 (Yellow) ~~LABORATORY~~ ^{LABORATORY & Env.} Copy

~~DEC 30 1980~~

T-3

PLEASE TYPE OR PRINT
WITH BALLPOINT PEN

MUNICIPALITY <i>HANOVER TWP</i>	COUNTY <i>MERCIS</i>	STREAM
FACILITY <i>Citron-Airtron</i>	LOCATION <i>HANOVER AVE</i>	
REPRESENTATIVE <i>EE</i>	TITLE	COLL NAME <i>Glancarli-Mennel</i>
REMARKS <i>Well #4 grab</i>		

BACT. LAB NO. _____
DATE REC'D. _____
BOTTLE NO. C05728
DATE REC'D. _____
STORET ENT. _____
READ _____

Station Identification Number

YR. MO. DAY

HOUR

Sample No.

[illegible]

8	0	1	1	1	8
---	---	---	---	---	---

1	2	3	5
---	---	---	---

[illegible]

FIELD ANALYSIS

<input type="checkbox"/> Water Temp °C	P00010,			
<input type="checkbox"/> D.O. - Winkler	P00300,			
<input type="checkbox"/> D.O. - Probe	P00299,			
<input type="checkbox"/> pH (Field)	P00400,			
<input type="checkbox"/> Sample Depth-ft.	P00003,			
<input type="checkbox"/> Stream Flow-CFS	P00061,			
<input type="checkbox"/> Gage Height-ft.	P00065,			
<input type="checkbox"/> Spec. Cond. ● 25°C	P00095,			
<input type="checkbox"/> Salinity ‰/00	P00480,			
<input type="checkbox"/> Tide Stage	P70211,			

CONDITION CODES

<input type="checkbox"/> Weather Conditions	P00041,	
<input type="checkbox"/> Flow Severity	P01351,	
<input type="checkbox"/> _____ Severity	P013_ _,	
<input type="checkbox"/> _____ Severity	P013_ _,	

NUTRIENTS

LEVEL	<input type="checkbox"/> HIGH	<input type="checkbox"/> LOW
<input type="checkbox"/> NO ₂ - N	P00615,	
<input type="checkbox"/> NO ₂ + NO ₃ - N	P00630,	
<input type="checkbox"/> NH ₃ - N	P00610,	
<input type="checkbox"/> Tot Kjeldhal N	P00625,	
Ortho-PO ₄ as P	<input type="checkbox"/> P671,	
PO ₄	<input type="checkbox"/> P660,	
P	<input type="checkbox"/> P665,	
Phosphorus-tot as PO ₄	<input type="checkbox"/> P650,	

BACTERIOLOGICAL - DILUTIONS (REQUESTED)

Fecal Coliform		-1	-2	-3	-4	-5	-6
Total Coliform	10	1	10	10	10	10	10

Fecal Streptococci		-1	-2	-3	-4	-5	-6
	10	1	10	10	10	10	10

☐ MPN P31615, ☐ MF P31613,

#100 ml

☐ Fecal Strept P31677,

MPN/100ml

☐ Tot coli P31505,

MPN/100 ml

BIOCHEMICAL OXYGEN DEMAND

INITIAL D.O. (lab.) _____ SAMPLE _____

	SEED	YES []	NO []
CONC. %	[]	[]	[]
BOD _____	[]	[]	[]

☐ BOD ☐ 5-DAY P310, ☐
☐ 6-DAY P312, ☐

COD ☐ Low Level P335, ☐ High Level P340,

--	--	--	--	--	--

☐ TOC P00680,

--	--	--	--	--	--

☐ Color Pt - Cou P00080,☐ Turbidity P00070,☐ Suspended Solids P00530,

<input type="checkbox"/> Suspended Solids fixed	P00540,					
--	---------	--	--	--	--	--

<input type="checkbox"/> Tot. Solids	P00500,								
--------------------------------------	---------	--	--	--	--	--	--	--	--

☐ Tot. Solids - fixed P00510,

<input type="checkbox"/> Tot. Dissolved Solids (TDS)	P70300,						
--	---------	--	--	--	--	--	--

<input type="checkbox"/> pH (LAB)	P00400,								
<input type="checkbox"/> Alkalinity as CaCO ₃	P00410,								
<input type="checkbox"/> Min. Acidity as CaCO ₃	P00436,								
<input type="checkbox"/> Chloride	P00940,								
<input type="checkbox"/> MBAS	P38260,								
<input type="checkbox"/> Phenols	P32730,								
<input type="checkbox"/> Hardness - tot as CaCO ₃	P00900,								
<input type="checkbox"/> Sulfate	P00945,								
<input type="checkbox"/> Oil & Grease	P00556,								
<input type="checkbox"/> Petroleum Hydrocarbons	P45501,								
<input checked="" type="checkbox"/> Cyanide	P00720,								

<input type="checkbox"/> As - tot ug/l	P01002,								
<input checked="" type="checkbox"/> Cd - tot ug/l	P01027,	1							
<input checked="" type="checkbox"/> Cr - tot ug/l	P01034,	193							
<input checked="" type="checkbox"/> Cu - tot ug/l	P01042,	253							
<input type="checkbox"/> Fe - tot ug/l	P01045,								
<input type="checkbox"/> Hg - tot ug/l	P71900,								
<input type="checkbox"/> Mn - tot ug/l	P01055,								
<input checked="" type="checkbox"/> Ni - tot ug/l	P01067,	233							
<input checked="" type="checkbox"/> Pb - tot ug/l	P01051,	28							
<input checked="" type="checkbox"/> Zn - tot ug/l	P01092,	1145							

ADDITIONAL ANALYSIS

☒ Ag P ppb
☒ Al P ppb
☐ _____ P _____

17				
46035				

RESULTS mg/L unless otherwise noted

Date _____

Time

CHAIN OF CUSTODY
From (Name)

NO = NON-DETACHED: I. E. BELOW
DETECTABLE LIMITS RE MEMO

~~DEC 30 1980~~

Chemist Review

Part 1(White) - Water Quality Inventory Copy
Part 2(Green) - Chemistry Copy

Part 3(Pink) - Water Resources Copy (for Transmission)
 Part 4(Yellow) - Bacteriology Copy

T-4

STATE OF NEW JERSEY
Department of Environmental Protection
Water Analysis

PLEASE TYPE OR PRINT
WITH BALLPOINT PEN

MUNICIPALITY HANOVER TWP	COUNTY MORRIS	STREAM
FACILITY LITCON - Airtron	LOCATION HANOVER AVE	
REPRESENTATIVE FE	TITLE	COLL NAME Giancarli - Mennel
REMARKS Well # 5 grab		

BACT. LAB NO. _____
DATE REC'D. _____
BOTTLE NO. 005729
DATE REC'D. _____
STORET ENT. _____
READ _____

Station Identification Number													YR. MO. DAY			HOUR			Sample No.														
S	C	,											8	0	1	1	8	1	2	2	0	,	P	8	,								

FIELD ANALYSIS

<input type="checkbox"/> Water Temp °C	P00010,				
<input type="checkbox"/> D.O. - Winkler	P00300,				
<input type="checkbox"/> D.O. - Probe	P00299,				
<input type="checkbox"/> pH (Field)	P00400,				
<input type="checkbox"/> Sample Depth-ft.	P00003,				
<input type="checkbox"/> Stream Flow-CFS	P00061,				
<input type="checkbox"/> Gage Height-ft.	P00065,				
<input type="checkbox"/> Spec. Cond. ● 25°C	P00095,				
<input type="checkbox"/> Salinity ‰/00	P00480,				
<input type="checkbox"/> Tide Stage	P70211,				

CONDITION CODES

<input type="checkbox"/> Weather Conditions	P00041,
<input type="checkbox"/> Flow Severity	P01351,
<input type="checkbox"/> _____ Severity	P013__ ,
<input type="checkbox"/> _____ Severity	P013__ ,

NUTRIENTS

LEVEL	<input type="checkbox"/> HIGH	<input type="checkbox"/> LOW
<input type="checkbox"/> $\text{NO}_2 - \text{N}$	P00615,	
<input type="checkbox"/> $\text{NO}_2 + \text{NO}_3 - \text{N}$	P00630,	
<input type="checkbox"/> $\text{NH}_3 - \text{N}$	P00610,	
<input type="checkbox"/> Tot Kjeldhal N	P00625,	
Ortho - PO_4 as PO_4^{P}	<input type="checkbox"/> P671, <input type="checkbox"/> P660,	
Phosphorus-tot as PO_4^{P}	<input type="checkbox"/> P665, <input type="checkbox"/> P650,	

BACTERIOLOGICAL – DILUTIONS (REQUESTED)

Fecal Coliform		-1	-2	-3	-4	-5	-6
Total Coliform	10	1	10	10	10	10	10

Fecal Streptococci		-1	-2	-3	-4	-5	-6
	10	1	10	10	10	10	10

☐ MPN P31615, ☐ MF P31613,

--	--	--	--	--	--	--	--

#100 ml

☐ Fecal Strept P31677,

--	--	--	--	--	--	--	--

MPN/100ml

☐ Tot coli P31505,

--	--	--	--	--	--	--	--

MPN/100 ml

BIOCHEMICAL OXYGEN DEMAND

[illegible]

COD ☐ Low Level P335,

--	--	--	--	--	--

☐ High Level P340,

--	--	--	--	--	--

☐ TOC P00680,

--	--	--	--	--	--

<input type="checkbox"/> Color Pt - Cou	P00080,						
<input type="checkbox"/> Turbidity	P00070,						
<input type="checkbox"/> Suspended Solids	P00530,						
<input type="checkbox"/> Suspended Solids fixed	P00540,						
<input type="checkbox"/> Tot. Solids	P00500,						
<input type="checkbox"/> Tot. Solids - fixed	P00510,						
<input type="checkbox"/> Tot. Dissolved Solids (TDS)	P70300,						

<input type="checkbox"/> pH (LAB)	P00400,								
<input type="checkbox"/> Alkalinity as CaCO ₃	P00410,								
<input type="checkbox"/> Min. Acidity as CaCO ₃	P00436,								
<input type="checkbox"/> Chloride	P00940,								
<input type="checkbox"/> MBAS	P38260,								
<input type="checkbox"/> Phenols	P32730,								
<input type="checkbox"/> Hardness - tot as CaCO ₃	P00900,								
<input type="checkbox"/> Sulfate	P00945,								
<input type="checkbox"/> Oil & Grease	P00556,								
<input type="checkbox"/> Petroleum Hydrocarbons	P45501,								
<input checked="" type="checkbox"/> Cyanide	P00720,								

<input type="checkbox"/> As - tot ug/l	P01002,								
<input checked="" type="checkbox"/> Cd - tot ug/l	P01027,	1							
<input checked="" type="checkbox"/> Cr - tot ug/l	P01034,	33							
<input checked="" type="checkbox"/> Cu - tot ug/l	P01042,	151							
<input type="checkbox"/> Fe - tot ug/l	P01045,								
<input type="checkbox"/> Hg - tot ug/l	P71900,								
<input type="checkbox"/> Mn - tot ug/l	P01055,								
<input checked="" type="checkbox"/> Ni - tot ug/l	P01067,	93							
<input checked="" type="checkbox"/> Pb - tot ug/l	P01051,	113							
<input checked="" type="checkbox"/> Zn - tot ug/l	P01092,	205							

ADDITIONAL ANALYSIS

☒ Ag P ppb
☒ Al P ppb
☐ _____ P _____

10	K		
26	55	0	

RESULTS mg/L unless otherwise noted

1970-1971

~~DEC 30 1980~~

REPORT SUBMITTED

DIV. OF LABORATORIES & FPM

Chemis: Review

Part 1(White) - Water Quality Inventory Copy
Part 2(Green) - Chemistry Copy

Part 3(Pink) - Water Resources Copy(For Transmission)
Part 4(Yellow) - Bacteriology Copy

T-5

BACT. LAB NO.	_____
DATE REC'D.	_____
BOTTLE NO.	<i>C05728</i>
DATE REC'D.	_____
STORET ENT.	_____
READ	_____

MUNICIPALITY HANDER TWP	COUNTY MORRIS	STREAM
FACILITY Linton-Airgreen	LOCATION HANDER AVE	
REPRESENTATIVE E.E.	TITLE	COLL NAME Graincarti - Mennel
REMARKS Well # 4		

HOUR

[illegible]

RMKS.

[illegible]

Part 4 (Yellow) - Bacteriology Copy

T-6

BACT. LAB NO. _____
DATE REC'D. _____
BOTTLE NO. C05729
DATE REC'D. _____
STOR ET ENT. _____
READ _____

STATION IDENTIFICATION NUMBER

YR. MO. DAY

HOUR

[illegible]

FIELD ANALYSIS

<input type="checkbox"/> Water Temp °C	P10,				
<input type="checkbox"/> D.O.-Winkler	P300,				
<input type="checkbox"/> D.O.-Probe	P299,				
<input type="checkbox"/> p ^H (Field)	P400,				
<input type="checkbox"/> Sample Depth-ft.	P3,				
<input type="checkbox"/> Gage Height-ft.	P65,				
<input type="checkbox"/> Spec. Cond. @ 25°C	P95,				
<input type="checkbox"/> Salinity ‰	P480,				
<input type="checkbox"/> Tide Stage	P70211,				

BACTERIOLOGICAL - DILUTIONS (REQUESTED)

Fecal Coliform		-1	-2	-3	-4	-5	-6
Total Coliform	10	1	10	10	10	10	10
Fecal Streptococci	10	1	10	10	10	10	10

Fecal coli	<input type="checkbox"/> MPN	P31615,					
/100 ml	<input type="checkbox"/> MF	P31613,					

☐ Fecal Strept
MPN /100 ml --- P31677,

--	--	--	--	--	--

<input type="checkbox"/> Tot coll MPN	P31505,					
--	---------	--	--	--	--	--

BIOCHEMICAL OXYGEN DEMAND

INITIAL D.O. (lab.) _____ SAMPLE _____
SEED YES ☐ NO ☐

CONC. %			
BOD			

☐ BOD ☐ 5-DAY P310.
☐ 6-DAY P312.

ANALYSIS

UNITS

PARAMETER

VALUE

RMKS

[illegible]

DATE _____

TIME

CHAIN OF CUSTODY
FROM (NAME)

ND = NON-DETECTABLE, E. BELOW
DETECTABLE LIMITS RE MEMO

~~DEC 30 1980~~

Chemist Review

Part 1(White) - Water Quality Inventory Copy Part 3(Pink) - ~~Base Data Tables & CDD~~ For Transmission
Part 2(Green) - Chemistry Copy Part 4(Yellow) - Bacteriology Copy

REPORT SUBMITTED

—

FINAL REPORT OF
GROUNDWATER MONITORING PROGRAM
AirTron - DIVISION OF LITTON INDUSTRIES
MORRIS PLAINS, NEW JERSEY

✓ = C
For

AirTron

By

CONVERSE WARD DAVIS DIXON, INC.

10 August 1981

Project No. 81-07125-01

UT-1

PROGRAM DESCRIPTION

Chemical analyses for this project consisted of analysis for TOC and TCE on soils and TCE on groundwater. Eighteen (18) soil samples were analyzed for TOC. Duplicate analyses for TCE were performed on six (6) soil samples. Five (5) groundwater samples were analyzed for TCE. All analyses were performed by General Testing Inc. Analysis was performed by GC Methods.

TABLE 2

ANALYTICAL RESULTS OF SOIL SAMPLES - CONCENTRATION OF
TRICHLOROETHYLENE (TCE) AND TOTAL ORGANIC CARBON (TOC), JUNE 1981

I don't believe that this is ppb in soil! it must be ppm!

Well No.	Sample No.	Sample Depth (Ft)	TOC (μ g/gm)	TCE (μ g/gm)	
				Analysis No. 1	Duplicate Analysis
MW-1	4	20	255		
	8	40	228	.038	.104
	12	60	323		
MW-2	2	10	84		
	3	20	78	<.005	<.005
	4	30	66		
	5	40	247	.160	.190
	6	50	213		
	7	60	279	.490	.640
	8	70	203		
	9	80	618		
MW-3	3	20	92		
	5	40	260	.042	.026
	7	60	113		
	9	80	76.5		
B 1	6	30	228	<.005	<.005
B 3	6	30	214		
	7	35	209		

increasing w/ depth

TABLE 3

ANALYTICAL RESULTS OF GROUNDWATER SAMPLES - CONCENTRATION OF
TRICHLOROETHYLENE (TCE) 13 JANUARY 1981 (NJDEP SAMPLING) AND
23 JUNE 1981 (CWDD SAMPLING)

Well No.	<u>TCE (mg/l) ppm</u>			
	13 January 1981		23 June 1981	
1M	.35	350	Broken	
2M	2.90	2900	.062	62 ppb
No. 1	1100.00	1,100,000 ppb !	14.60	14,600 ppb
No. 2	.14	140	--	
No. 3	.007	7	--	
MW-1	--		.007	7
MW-2	--		9.66	9660
MW-3	--		4.24	4240

Litton Industries/Airtron Division
200 East Hanover Avenue
Morris Plains, New Jersey 07950

NOV 26 1984

Attention: John Nicola; Plant Engineer

Re: Ground Water Investigation
Hanover Township/Morris County

Dear Mr. Nicola:

Enclosed is a copy of the laboratory analysis results of the samples collected on September 6 & 7, 1984. Please send me a copy of the analytical results for the duplicate samples which were collected by your consultant.

Very truly yours,

Original signed by

Jeffrey Hoffman
Enforcement Unit
Northern Region
Enforcement Element

Enclosure
A7:sv

cc: Joseph M. Mikulka, Chief, Northern Region
Steve Spayl, New Jersey Geological Survey

bcc: Jeffrey Hoffman
Region File thru J. Mikulka, J. Miller & J. DeNito
Central File/NJPDES Litton Airton

V-1,

**PLEASE TYPE OR PRINT
WITH BALLPOINT PEN**

STATE OF NEW JERSEY
Department of Environmental Protection
Division of Water Resources
WATER ANALYSIS

AIN OF CUSTODY

MUNICIPALITY <i>Hanover Twp</i>	COUNTY <i>Morris</i>	STREAM
FACILITY <i>L. Han / Airtion</i>	LOCATION <i>E. Hanover Ave</i>	
REPRESENTATIVE <i>EE</i>	TITLE	COLL NAME <i>Jeffrey Hoffman</i>
REMARKS		<i>222 10D</i>
	<i>Well #2</i>	

BACT. LAB NO. _____
DATE REC'D. _____
BOTTLE NO. 11875
DATE REC'D. _____

STORET ENT. _____
READ _____

STATION IDENTIFICATION NUMBER

YR. MO. DAY

HOUR

[illegible]

FIELD ANALYSIS

<input type="checkbox"/> Water Temp °C	P10,				
<input type="checkbox"/> D.O.-Winkler	P300,				
<input type="checkbox"/> D.O.-Probe	P299,				
<input type="checkbox"/> pH (Field)	P400,				
<input type="checkbox"/> Sample Depth-ft.	P3,				
<input type="checkbox"/> Gage Height-ft.	P65,				
<input type="checkbox"/> Spec. Cond. @ 25°C	P95,				
<input type="checkbox"/> Salinity ‰	P480,				
<input type="checkbox"/> Tide Stage	P70211,				

BACTERIOLOGICAL - DILUTIONS (REQUESTED)

Fecal Coliform		-1	-2	-3	-4	-5	-6
Total Coliform	10	1	10	10	10	10	10
Fecal Streptococci		-1	-2	-3	-4	-5	-6
	10	1	10	10	10	10	10

Fecal coli /100 ml	<input type="checkbox"/> MPN	P31615,						
	<input type="checkbox"/> MF	P31613,						

<input type="checkbox"/> Fecal Strept MPN /100 ml	P31677,						
---	---------	--	--	--	--	--	--

<input type="checkbox"/> Tot coli MPN /100 ml	P31505,						
---	---------	--	--	--	--	--	--

BIOCHEMICAL OXYGEN DEMAND

INITIAL D.O. (lab.) _____ SAMPLE _____
SEED YES ☐ NO ☐

CONC. %			
BOD			

☐ BOD ☐ 5-DAY P310,

--	--	--	--	--	--

☐ 6-DAY P312,

--	--	--	--	--	--

ANALYSIS

UNITS

PARAMETER

VALUE

RMKS.

[illegible]

DATE _____

TIME

CHAIN OF CUSTODY
FROM (NAME)

REPORT SUBMITTED TO NAMEY

OCT 5 1984

~~NJDOH Environmental
Chemistry Laboratory~~

Chemist Review

Part 1
Part 2

- Water Quality Inventory Copy
- Chemistry Copy

Part 3
Part 4

- Water Resources Copy (For Transmission)
- Bacteriology Copy

8-3

**PLEASE TYPE OR PRINT
WITH BALLPOINT PEN**

MUNICIPALITY	County	Stream
Facility	Location	
Representative	Title	Coll Name
Remarks		

BACT. LAB NO.	_____
DATE REC'D.	_____
BOTTLE NO.	<u>11878</u>
DATE REC'D.	_____
STREET	_____
ENT.	_____
READ	_____

STATION IDENTIFICATION NUMBER

YR. MO. DAY

HOUR

[illegible]

FIELD ANALYSIS

<input type="checkbox"/> Water Temp °C	P10,
<input type="checkbox"/> D.O.-Winkler	P300,
<input type="checkbox"/> D.O.-Probe	P299,
<input type="checkbox"/> pH (Field)	P400,
<input type="checkbox"/> Sample Depth-ft.	P3,
<input type="checkbox"/> Gage Height-ft.	P65,
<input type="checkbox"/> Spec. Cond. ● 25°C	P95,
<input type="checkbox"/> Salinity ‰	P480,
<input type="checkbox"/> Tide Stage	P70211,

BACTERIOLOGICAL - DILUTIONS (REQUESTED)

Fecal Coliform		-1	-2	-3	-4	-5	-6
Total Coliform	10	1	10	10	10	10	10
Fecal Streptococci		-1	-2	-3	-4	-5	-6
	10	1	10	10	10	10	10
Fecal coli /100 ml	<input type="checkbox"/> MPN <input type="checkbox"/> MF	P31615, P31613,					
<input type="checkbox"/> Fecal Strept MPN /100 ml		P31677,					
<input type="checkbox"/> Tot coli MPN /100 ml		P31505,					

BIOCHEMICAL OXYGEN DEMAND

INITIAL D.O. (lab.) _____ SAMPLE
SEED YES ☐ NO ☐

CONC. %			
BOD			

☐ BOD ☐ 5-DAY P310,

--	--	--	--	--	--

☐ 6-DAY P312,

--	--	--	--	--	--

ANALYSIS

UNITS[illegible]

PARAMETER

VALUE**RMKS**[illegible]

DATE _____

TIME

**CHAIN OF CUSTODY
FROM (NAME)**

TO (NAME)

REPORT SUBMITTED

OCT 5 1994

~~NIDOH Environmental~~
~~Chemistry Laboratory~~

Chemist Review

Part 1
Part 2

- Water Quality Inventory Copy
- Chemistry Copy

Part 3
Part 4

Water Resources Copy **V-4**
Bacteriology Copy

**PLEASE TYPE OR PRINT
WITH BALLPOINT PEN**

STATE OF NEW JERSEY
Department of Environmental Protection
Division of Water Resources
WATER ANALYSIS

RAIN OF CUSTODY

MUNICIPALITY	County	Stream
Hanover Twp	Morris	
FACILITY	LOCATION	
Lithon / Airtown	E. Hanover Ave	
REPRESENTATIVE	TITLE	COLL NAME
E.E.		Jeffrey Hoffman
REMARKS		222 100
	mw-2	

BACT. LAB NO. _____
 DATE REC'D. _____
 BOTTLE NO. 11851
 DATE REC'D. _____
 STORET ENT. _____
 READ _____

STATION IDENTIFICATION NUMBER

YR. MO. DAY

HOUR

SC, 840907 1319.

FIELD ANALYSIS

- | | | | | | | | |
|--|---------|--|--|--|--|--|--|
| <input type="checkbox"/> Water Temp °C | P10, | | | | | | |
| <input type="checkbox"/> D.O.-Winkler | P300, | | | | | | |
| <input type="checkbox"/> D.O.-Probe | P299, | | | | | | |
| <input type="checkbox"/> pH (Field) | P400, | | | | | | |
| <input type="checkbox"/> Sample Depth-ft. | P3, | | | | | | |
| <input type="checkbox"/> Gage Height-ft. | P65, | | | | | | |
| <input type="checkbox"/> Spec. Cond.
● 25°C | P95, | | | | | | |
| <input type="checkbox"/> Salinity ‰ | P480, | | | | | | |
| <input type="checkbox"/> Tide Stage | P70211, | | | | | | |

BACTERIOLOGICAL - DILUTIONS (REQUESTED)

Fecal Coliform			-1	-2	-3	-4	-5	-6
Total Coliform	10	1	10	10	10	10	10	10

Focal Streptococci	10	1	-1	-2	-3	-4	-5	-6
	10	10	10	10	10	10	10	10

Fecal coli /100 ml

<input type="checkbox"/> MPN P31615,					
<input type="checkbox"/> MF P31613,					

☐ Fecal Strept
MPN
/100 ml

P31677.

--	--	--	--	--

☐ Tot coll
MPN /100 ml

P31505,

--	--	--	--	--	--

BIOCHEMICAL OXYGEN DEMAND

INITIAL D.O. (lab.) _____ SAMPLE

SEED YES ☐ NO ☐

CONC. %			
BOD			

☐ BOD ☐ 5-DAY P310,

--	--	--	--	--

☐ 6-DAY P312,

--	--	--	--	--

ANALYSIS

UNITS

PARAMETER

VALUE

RMKS

[illegible]

DATE _____

TIME

CHAIN OF CUSTODY
FROM (NAME)

HERON ADMITTED
TO (NAME)

DATE _____
T = extreme dilution

~~OCT 5 1984~~

NIDOH Environmental
Chemistry Laboratory

**PLEASE TYPE OR PRINT
WITH BALLPOINT PEN**

STATE OF NEW JERSEY
Department of Environmental Protection
Division of Water Resources
WATER ANALYSIS

CHAIN OF CUSTODY

MUNICIPALITY	County	Stream
Haver	Morris	
Facility	Location	
Litter/Airborn	E. Haver Ave	
Representative	Title	Coil Name
EE		Jeffrey Hoffman
Remarks		2221 QD
	MW-2M	

BACT. LAB NO. _____
DATE REC'D. _____
BOTTLE NO. 11879
DATE REC'D. _____

STORET ENT. _____
READ _____

STATION IDENTIFICATION NUMBER

YR. MO. DAY

HOUR

[illegible]

FIELD ANALYSIS

<input type="checkbox"/> Water Temp °C	P10,			
<input type="checkbox"/> D.O.-Winkler	P300,			
<input type="checkbox"/> D.O.-Probe	P299,			
<input type="checkbox"/> pH (Field)	P400,			
<input type="checkbox"/> Sample Depth-ft.	P3,			
<input type="checkbox"/> Gage Height-ft.	P65,			
<input type="checkbox"/> Spec. Cond. ● 25°C	P95,			
<input type="checkbox"/> Salinity ‰	P480,			
<input type="checkbox"/> Tide Stage	P70211,			

BACTERIOLOGICAL - DILUTIONS (REQUESTED)

Fecal Coliform			-1	-2	-3	-4	-5	-6
Total Coliform	10	1	10	10	10	10	10	10
Fecal Streptococci	10	1	10	10	10	10	10	10

Fecal coli /100 ml ☐ MPN P31615, ☐ MF P31613,

--	--	--	--	--	--

☐ Fecal Strept
MPN
/100 ml

P31677,

--	--	--	--	--

☐ Tot coll
MPN /100 ml

P31505,

--	--	--	--	--

BIOCHEMICAL OXYGEN DEMAND

INITIAL D.O. (lab.) _____ SAMPLE
SEED YES ☐ NO ☐

CONC. %			
BOD			

☐ BOD ☐ 5-DAY P310,

--	--	--	--	--	--

☐ 6-DAY P312,

--	--	--	--	--	--

ANALYSIS

UNITS

PARAMETER

VALUE

RMKS.

- ☒ V.D. Scan ppb
- ☐
- ☐ chloroform
- ☐ 1,1 dichloroethene
- ☐ Tetrachloroethene
- ☐ 1,1,1 trichloroethane
- ☐ Trichloroethene
- ☐
- ☐ Aromatic hydrocarbons

[illegible]

DATE _____

TIME

CHAIN OF CUSTODY
FROM (NAME)

TO (NAME)

REPORT SUBMITTED

~~OCT 5 1984~~

~~NADPH Environmental~~
~~Chemistry Laboratory~~

Chemist Review

Part 1
Part 2

- Water Quality Inventory Copy
- Chemistry Copy

Part 3
Part 4

Water Resources Copy (For Transmission)
- Bacteriology Copy *V-6*

**PLEASE TYPE OR PRINT
WITH BALLPOINT PEN**

STATE OF NEW JERSEY
Department of Environmental Protection
Division of Water Resources

CHAIN OF CUSTODY

MUNICIPALITY <i>Hanover Twp</i>	COUNTY <i>Morris</i>	STREAM
FACILITY <i>Litten / Antron</i>	LOCATION <i>E. Hanover Ave</i>	
REPRESENTATIVE <i>EE</i>	TITLE	COLL NAME <i>Jethrey Hoffman</i>
REMARKS		<i>22210D</i>
	<i>Well #1</i>	

BACT. LAB NO.	_____
DATE REC'D.	_____
BOTTLE NO.	<u>11880</u>
DATE REC'D.	_____
STORET ENT. _____	
READ _____	

STATION IDENTIFICATION NUMBER

YR. MO. DAY

HOUR

[illegible]

FIELD ANALYSIS

<input type="checkbox"/> Water Temp °C	P10,						
<input type="checkbox"/> D.O.-Winkler	P300,						
<input type="checkbox"/> D.O.-Probe	P299,						
<input type="checkbox"/> p ^H (Field)	P400,						
<input type="checkbox"/> Sample Depth-ft.	P3,						
<input type="checkbox"/> Gage Height-ft.	P65,						
<input type="checkbox"/> Spec. Cond. ● 25°C	P95,						
<input type="checkbox"/> Salinity ‰/‰	P480,						
<input type="checkbox"/> Tide Stage	P70211,						

BACTERIOLOGICAL - DILUTIONS (REQUESTED)

Fecal Coliform		-1	-2	-3	-4	-5	-6
Total Coliform	10	1	10	10	10	10	10

Fecal Streptococci		-1	-2	-3	-4	-5	-6
	10	1	10	10	10	10	10

☐ MPN P31615,

--	--	--	--	--	--	--	--

☐ MF P31613,

--	--	--	--	--	--	--	--

☐ Fecal Strept MPN /100 ml P31677,

--	--	--	--	--	--	--	--

☐ Tot col MPN /100 ml P31505,

--	--	--	--	--	--	--	--

BIOCHEMICAL OXYGEN DEMAND

INITIAL D.O. (lab.) _____ **SAMPLE**

SEED YES ☐ **NO** ☐

CONC.%			
BOD ____			

☐ BOD ☐ **5-DAY P₃₁₀,**
☐ **6-DAY P₃₁₂,**

ANALYSIS

UNITS

PARAMETER

VALUE

BMKS

[illegible]

DATE _____

TIME

CHAIN OF CUSTODY
FROM (NAME)

TO (NAME)

REPORT SUBMITTED

OCT 5 1984

~~NIEOM Environmental~~
Chemistry Laboratory

Chemist Review

Part 1
Part 2

- Water Quality Inventory Copy
- Chemistry Copy

Part 3
Part 4

- Bacteriology Copy V-7

CHAIN OF CUSTODY

**PLEASE TYPE OR PRINT
WITH BALLPOINT PEN**

MUNICIPALITY <i>Hanover Twp</i>	COUNTY <i>Morris</i>	STREAM
FACILITY <i>Meunien</i>	LOCATION <i>E. Hanover Ave</i>	
REPRESENTATIVE <i>EE</i>	TITLE	COLL NAME <i>Jeffrey Hoffman</i>
REMARKS	<i>Meunien Well #1</i> <i>2221 QD</i>	

BACT. LAB NO. _____
DATE REC'D. _____
BOTTLE NO. 11876
DATE REC'D. _____

STORET ENT. _____
READ _____

STATION IDENTIFICATION NUMBER

YR. MO. DAY

HOUR

[illegible]

FIELD ANALYSIS

- | | |
|--|---------|
| <input type="checkbox"/> Water Temp °C | P10, |
| <input type="checkbox"/> D.O.-Winkler | P300, |
| <input type="checkbox"/> D.O.-Probe | P299, |
| <input type="checkbox"/> pH (Field) | P400, |
| <input type="checkbox"/> Sample Depth-ft. | P3, |
| <input type="checkbox"/> Gage Height-ft. | P65, |
| <input type="checkbox"/> Spec. Cond.
● 25°C | P95, |
| <input type="checkbox"/> Salinity ‰ | P480, |
| <input type="checkbox"/> Tide Stage | P70211. |

BACTERIOLOGICAL - DILUTIONS (REQUESTED)

Fecal Coliform			-1	-2	-3	-4	-5	-6
Total Coliform	10	1	10	10	10	10	10	10
Fecal Streptococci	10	1	-1	-2	-3	-4	-5	-6
	10	1	10	10	10	10	10	10

Fecal coli	<input type="checkbox"/> MPN	P31615,					
/100 ml	<input type="checkbox"/> MF	P31613,					

☐ Fecal Strept
MPN
/100 ml

P31677,

--	--	--	--	--	--

☐ Tot coll MPN /100 ml P31505,

--	--	--	--	--

BIOCHEMICAL OXYGEN DEMAND

INITIAL D.O. (lab.) _____ SAMPLE

SEED YES ☐ NO ☐

CONC. %			
BOD			

☐ BOD ☐ 5-DAY P310,

--	--	--	--	--	--

☐ 6-DAY P312,

--	--	--	--	--	--

ANALYSIS

UNITS

PARAMETER

VALUE

RMKS.

[illegible][illegible]

DATE _____

TIME

CHAIN OF CUSTODY
FROM (NAME)

REPORT SUBMITTED
TO (NAME)

* note - 1 out of 4 vials contained air

~~OCT 5 1984~~

NIDOH Environmental
Chemistry Laboratory

Chemist Review

Part 1
Part 2

- Water Quality Inventory Copy
- Chemistry Copy

Part 3
Part 4

- Water Resources Copy (For Transmission)
- Bacteriology Copy *M-8*

**PLEASE TYPE OR PRINT
WITH BALLPOINT PEN**

STATE OF NEW JERSEY
Department of Environmental Protection
Division of Water Resources
WATER ANALYSIS

CHAIN OF CUSTODY

MUNICIPALITY <i>Haver</i>	COUNTY <i>Morris</i>	STREAM
FACILITY <i>Menager</i>	LOCATION <i>E. Haver Ave</i>	
REPRESENTATIVE <i>E.E.</i>	TITLE	COLL NAME <i>Jeffrey Holthaus</i>
REMARKS	<i>222 100</i>	
<i>Menager Well #2</i>		

BACT. LAB NO. _____
DATE REC'D. _____
BOTTLE NO. 11877
DATE REC'D. _____

STORET ENT. _____
READ _____

STATION IDENTIFICATION NUMBER

YR. MO. DAY

HOUR

[illegible]

FIELD ANALYSIS

<input type="checkbox"/> Water Temp °C	P10,							
<input type="checkbox"/> D.O.-Winkler	P300,							
<input type="checkbox"/> D.O.-Probe	P299,							
<input type="checkbox"/> pH (Field)	P400,							
<input type="checkbox"/> Sample Depth-ft.	P3,							
<input type="checkbox"/> Gage Height-ft.	P65,							
<input type="checkbox"/> Spec. Cond. ● 25°C	P95,							
<input type="checkbox"/> Salinity ‰	P480,							
<input type="checkbox"/> Tide Stage	P70211,							

BACTERIOLOGICAL - DILUTIONS (REQUESTED)

Fecal Coliform			-1	-2	-3	-4	-5	-6
Total Coliform	10	1	10	10	10	10	10	10
Fecal Streptococci	10	1	-1	-2	-3	-4	-5	-6
	10	1	10	10	10	10	10	10

Fecal coli /100 ml

<input type="checkbox"/> MPN	P31615,								
<input type="checkbox"/> MF	P31613,								

☐ Fecal Strept
MPN /100 ml

☐ Tot coll
MPN /100 ml

P31505,

--	--	--	--	--	--	--	--

BIOCHEMICAL OXYGEN DEMAND

INITIAL D.O. (lab.) _____ SAMPLE
SEED YES ☐ NO ☐

CONC. %			
BOD			

☐ BOD ☐ 5-DAY P310,

--	--	--	--	--	--

☐ 6-DAY P312,

--	--	--	--	--	--

ANALYSIS

UNITS

PARAMETER**VALUE**

R.M.K.S.

[illegible]

DATE _____

TIME

CHAIN OF CUSTODY
FROM (NAME)

REPORT SUBMITTED (NAME)

~~OCT 5 1984~~

NIDOH Environmental
Chemistry Laboratory

Chemist Review

Part 1
Part 2

- Water Quality Inventory Copy
- Chemistry Copy

Part 3
Part 4

- Water Resources Copy (For Transmissic
- Bacteriology Copy 11-9

CHAIN OF CUSTODY RECORD

[illegible]

Y-10

CHAIN OF CUSTODY RECORD

[illegible]

V-11



AIRTRON

200 East Hanover Avenue Morris Plains, New Jersey 07950 201-539-5500

January 24, 1985

State of New Jersey
Dept. of Environmental Protection
Division of Water Resources
CN-029
Trenton, N. J. 08625

Attn: Mr. Jeffrey Hoffman

Dear Mr. Hoffman:

Enclosed you will find copies of the analytical results for the second round of samples taken by our consultant as part of the Airtron quarterly monitoring program. We split the samples with Princeton Testing Laboratory and those results are also enclosed.

We will conduct the third round in March and, as in the past, we will inform you in advance so that you may participate in the program if you choose.

Please call if you have any questions pertaining to this information.

Very truly yours,

A handwritten signature in cursive script that reads 'John A. Nicola'.

John A. Nicola
Plant Engineer

aw

cc: EBukofsky
JLoSchiavo
Converse Consultants
(Brian Elwood)

91 Roseland Avenue
Caldwell, New Jersey 07006

Sample Identification No.: 2759-2762
Date Sample Received: December 19, 1984
Collected From: See Below

601 METHOD

<u>Parameter</u>	<u>Well #1</u>	<u>Well #2</u>	<u>Well 2M</u>	<u>Well MW-1</u>
Chloromethane	< 5	< 5	< 5	< 5
Bromomethane	< 5	< 5	< 5	< 5
Dichlorodifluoromethane, Vinyl Chloride*	< 5	< 5	< 5	< 5
Chloroethane	< 5	< 5	< 5	< 5
Methylenechloride	< 5	< 5	< 5	< 5
Fluorotrichloromethane	< 5	< 5	< 5	< 5
1,1-Dichloroethene	< 5	< 5	< 5	< 5
1,1-Dichloroethane	< 5	< 5	< 5	< 5
1,2-Dichloroethene (Trans)	151	38	61	< 5
Chloroform	31	< 5	15	< 5
1,1,2-Trichloro-1,2,2-Trifluoroethane	< 5	< 5	< 5	< 5
1,2-Dichloroethane	< 5	< 5	< 5	< 5
1,1,1-Trichloroethane	37	< 5	10	< 5
Carbon Tetrachloride	< 5	< 5	< 5	< 5
Bromodichloromethane	< 5	< 5	< 5	< 5
1,2-Dichloropropane	< 5	< 5	< 5	< 5
1,3-Dichloropropene (Trans)				
Trichloroethene	6100	80	1300	< 5
1,3-Dichloropropene (Cis), Chlorodibromomethane, 1,1,2-Trichloroethene	< 5	< 5	< 5	< 5
2-Chloroethylvinylether	< 5	< 5	< 5	< 5
Bromoform	8ppb	<25	<25	<25
1,1,2,2-Tetrachloroethane, Tetrachloroethylene*	1600	26	208	< 5
Monochlorobenzene	< 5	< 5	< 5	< 5

*Elute together

Laboratory Resources Inc.


Carol A. Price

Manager/Laboratory Services

91 Roseland Avenue
Caldwell, New Jersey 07006

Sample Identification No.: 2763-2765
Date Sample Received: December 19, 1984
Collected From: See Below

601 METHOD

<u>Parameter</u>	<u>Well MW 2</u>	<u>Well MW 3</u>	<u>Well Men 1</u>	<u>Trip</u>
Chloromethane	< 5	< 5	< 5	< 5
Bromomethane	< 5	< 5	< 5	< 5
Dichlorodifluoromethane, Vinyl Chloride*	< 5	< 5	< 5	< 5
Chloroethane	< 5	< 5	< 5	< 5
Methylenechloride	< 5	< 5	< 5	< 5
Fluorotrichloromethane	< 5	< 5	< 5	< 5
1,1-Dichloroethene	< 5	< 5	< 5	< 5
1,1-Dichloroethane	< 5	< 5	< 5	< 5
1,2-Dichloroethene (Trans)	103	19	15	< 5
Chloroform	< 5	< 5	< 5	< 5
1,1,2-Trichloro-1,2,2-Trifluoroethane	< 5	< 5	< 5	< 5
1,2-Dichloroethane	< 5	< 5	< 5	< 5
1,1,1-Trichloroethane	9	10	< 5	< 5
Carbon Tetrachloride	< 5	< 5	< 5	< 5
Bromodichloromethane	< 5	< 5	< 5	< 5
1,2-Dichloropropane	< 5	< 5	< 5	< 5
1,3-Dichloropropene(Trans)	< 5	< 5	< 5	< 5
Trichloroethene	9000	2000	730	< 5
1,3-Dichloropropene (Cis), Chlorodibromomethane, 1,1,2-Trichloroethene	< 5	< 5	50	< 5
2-Chloroethylvinylether	< 5	< 5	< 5	< 5
Bromoform	< 25	< 25	< 25	< 25ppb
1,1,2,2-Tetrachloroethane, Tetrachloroethylene	1800	1400	< 5	< 5
Monochlorobenzene	< 5	< 5	< 5	< 5

*Elute together

Laboratory Resources Inc.

Carol A. Price
Carol A. Price
Manager/Laboratory Services

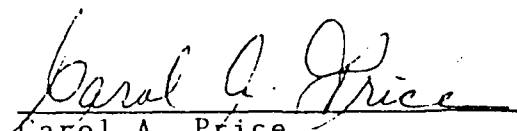
Converse Consultants Inc.
91 Roseland Avenue
Caldwell, New Jersey 07006

Date of Report: January 14, 1985
Sample Identification No.: 2759-2762
Date Sample Received: December 19, 1984
Collected From: See Below

602 METHOD

<u>Parameter</u>	<u>Well #1</u>	<u>Well #2</u>	<u>Well 2M</u>	<u>Well MW-1</u>
Benzene	< 5	< 5	< 5	< 5
Toluene	< 5	< 5	74	< 5
Ethyl Benzene	< 5	< 5	< 5	< 5
p-Xylene	< 5	< 5	< 5	< 5
m-Xylene	< 5	< 5	< 5	< 5
o-Xylene	< 5	< 5	< 5	< 5
Styrene	< 5	< 5	< 5	< 5
n-Propylbenzene	< 5	< 5	< 5	< 5

Laboratory Resources Inc.


Carol A. Price
Manager/Laboratory Services

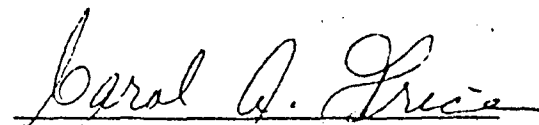
Converse Consultants Inc.
91 Roseland Avenue
Caldwell, New Jersey 07006

Date of Report: January 14, 1985
Sample Identification No.: 2763-2765
Date Sample Received: December 19, 1984
Collected From: See Below

602 METHOD

<u>Parameter</u>	<u>Well MW 2</u>	<u>Well MW 3</u>	<u>Well Men 1</u>	<u>Trip</u>
Benzene	< 5	< 5	< 5	< 5
Toluene	< 5	< 5	< 5	< 5
Ethyl Benzene	< 5	< 5	< 5	< 5
p-Xylene	< 5	< 5	< 5	< 5
m-Xylene	< 5	< 5	< 5	< 5
o-Xylene	< 5	< 5	< 5	< 5
Styrene	< 5	< 5	< 5	< 5
n-Propylbenzene	< 5	< 5	< 5	< 5

Laboratory Resources Inc.


Carol A. Price
Manager/Laboratory Services

MATRIX CODE.: PE/MW .

3108, Princeton, N.J. 08540

A. DUPLICATE ANALYSIS

[illegible]

$$RPL = \frac{(D_1 - D_2)}{\left(\frac{D_1 + D_2}{2} \right)} \times 100$$

QUALITY CONTROL REPORT

A. MATRIX SPIKE ANALYSIS

Analyst: JG
Date: 1-3-85
MATRIX CODE: PE/MW

P.O. Box 3105, Princeton, N.J. 08540

COMPOUND (including Surrogates)			CONCENTRATION (ug/l)			% Recovery*
Sample ID	COMPOUND NAME	METHOD	Sample Result (SR)	Spiked Sample Result (SSR)	Spike Added (SA)	
MW-1	Trichloroethylene	601/602	1.9	149	150	98
	Benzene		ND	55	46	119
	Tetrachloroethylene		ND	231	251	92
	Toluene		ND	83	87	95
	Chlorobenzene		ND	45	45	100
	Ethylbenzene		ND	44	45	97
	Methylene Chloride		ND	132	137	96
	1,1-dichloroethylene		ND	125	126	99
	1,1-dichloroethane		ND	113	123	92
	1,2-dichloroethylene		ND	106	126	84
	Chloroform		ND	226	233	97
	1,2-dichloroethane		ND	128	129	99
	1,1,1-trichloroethane		ND	136	135	101
	Carbon tetrachloride		ND	254	251	101
	Dichlorobromomethane		ND	305	308	99
	1,2-dichloropropylene		ND	122	120	102

*% Recovery = $\frac{(SSR - SR)}{(SA)} \times 100$

Matrix Codes:
Soil SO
Sludge SL
Drinking water DW



AIRTRON

200 East Hanover Avenue, Morris Plains, New Jersey 07950 201 539-5500

Self - Copies sent to
S. Spald + Central File

August 1, 1985

✓
Mr. Jeffrey Hoffman
State of New Jersey
Department of Environmental Protection
1259 Route #46
Parsippany, N. J. 07054

Dear Mr. Hoffman:

Enclosed are copies of the analytical results for the
fourth round of samples taken on June 20, 1985 by
Converse Consultants and Princeton Testing Laboratory.

Very truly yours,

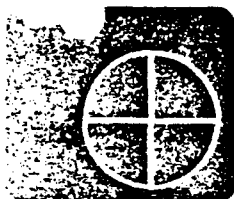
John A. Nicola
John A. Nicola
Plant Engineer

cc: EBukofsky
JLoSchiavo
Brian Ellwood, (Converse Consultants)

RECEIVED
DIVISION OF
WATER RESOURCES
ENFORCEMENT ELEMENT
JUL 31 1 53 PM '85

X-1

Princeton Service Center
U.S. Route 1
609-452-9050
TLX 84-3492



princeton testing laboratory



Job #39049
7-12-85

P.O. Box 3108, Princeton, N.J. 08540

Detection
Limit

2-M


Mennen

W-2

ug/l

Chloromethane	20	ND	ND	ND
Bromomethane	100	ND	ND	ND
Dichlorodifluoromethane	50	ND	ND	ND
Vinyl Chloride	20	ND	ND	ND
Chloroethane	20	ND	ND	ND
Methylene chloride	50	57	52	54
Trichlorofluoromethane	50	ND	ND	ND
1,1-dichloroethene	10	ND	ND	ND
1,1-dichloroethane	10	ND	ND	ND
trans-1,2-dichloroethene	10	63	54	59
Chloroform	20	18	16	ND
1,2-dichloroethane	10	ND	ND	ND
1,1,1-trichloroethane	20	ND	ND	ND
Carbon tetrachloride	20	ND	ND	ND
Bromodichloromethane	20	ND	ND	ND
1,2-dichloropropane	10	ND	ND	ND
trans-1,3-dichloropropene	50	ND	ND	ND
Trichloroethene	20	620	800	49
Dibromochloromethane	20	ND	ND	ND
1,1,2-trichloroethane	50	ND	ND	ND
cis-1,3-dichloropropene	50	ND	ND	ND
2-chloroethylvinylether	50	ND	ND	ND
Bromoform	100	ND	ND	ND
1,1,2,2-tetrachloroethane	100	ND	ND	ND
Tetrachloroethene	20	170	170	30
Benzene	10	ND	ND	ND
Toluene	10	< 10	ND	< 10
Chlorobenzene	10	ND	ND	ND
Ethylbenzene	10	ND	ND	ND
1,3-dichlorobenzene	10	ND	ND	ND
1,2-dichlorobenzene	10	ND	ND	ND
1,4-dichlorobenzene	10	ND	ND	ND

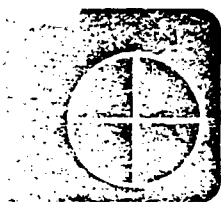
ND=not detected


Jon Gabry, PhD
Asst. Organic Lab Manager

JG:na

X-2

Princeton Service Center
U.S. Route 1
609-452-9050
TLX 84-3492



princeton testing laboratory



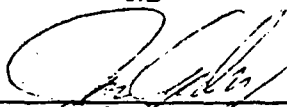
Member

Job #39049
7-12-85

P.O. Box 3108, Princeton, N.J. 08540

	Detection Limit	Well W-1 ug/l	MW-3
Chloromethane	80	ND	ND
Bromomethane	400	ND	ND
Dichlorodifluoromethane	200	ND	ND
Vinyl Chloride	80	ND	ND
Chloroethane	80	ND	ND
Methylene chloride	200	< 200	450
Trichlorofluoromethane	200	ND	ND
1,1-dichloroethene	40	ND	ND
1,1-dichloroethane	40	ND	ND
trans-1,2-dichloroethene	40	140	400
Chloroform	80	< 80	ND
1,2-dichloroethane	40	ND	ND
1,1,1-trichloroethane	80	ND	ND
Carbon tetrachloride	80	ND	ND
Bromodichloromethane	80	ND	ND
1,2-dichloropropane	40	ND	ND
trans-1,3-dichloropropene	200	ND	ND
Trichloroethene	80	3100	2000
Dibromochloromethane	200	ND	ND
1,1,2-trichloroethane	200	ND	ND
cis-1,3-dichloropropene	80	ND	ND
2-chloroethylvinylether	400	ND	ND
Bromoform	400	ND	ND
1,1,2,2-tetrachloroethane	400	ND	ND
Tetrachloroethene	80	1300	1600
Benzene	40	ND	ND
Toluene	40	< 40	45
Chlorobenzene	40	ND	ND
Ethylbenzene	40	ND	ND
1,3-dichlorobenzene	40	ND	ND
1,2-dichlorobenzene	40	ND	ND
1,4-dichlorobenzene	40	ND	ND

ND=not detected


Jon Gabry, PhD
Asst. Organic Lab Manager

JG:na

X-3

Princeton Service Center
U.S. Route 1
609-452-9050
TLX 84-3492



princeton testing laboratory



Member

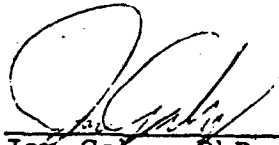
Job #39049
7-12-85

P.O. Box 3105, Princeton, N.J. 08540

Detection
Limit ug/l MW-2

Chloromethane	200	ND
Bromomethane	1000	ND
Dichlorodifluoromethane	500	ND
Vinyl Chloride	200	ND
Chloroethane	200	ND
Methylene chloride	500	< 500
Trichlorofluoromethane	500	ND
1,1-dichloroethene	100	ND
1,1-dichloroethane	100	ND
trans-1,2-dichloroethene	100	420
Chloroform	200	ND
1,2-dichloroethane	100	ND
1,1,1-trichloroethane	200	ND
Carbon tetrachloride	200	ND
Bromodichloromethane	200	ND
1,2-dichloropropane	100	ND
trans-1,3-dichloropropene	500	ND
Trichloroethene	200	6000
Dibromochloromethane	200	ND
1,1,2-trichloroethane	500	ND
cis-1,3-dichloropropene	500	ND
2-chloroethylvinylether	500	ND
Bromoform	1000	ND
1,1,2,2-tetrachloroethane	1000	ND
Tetrachloroethene	200	2600
Benzene	100	ND
Toluene	100	ND
Chlorobenzene	100	ND
Ethylbenzene	100	ND
1,3-dichlorobenzene	100	ND
1,2-dichlorobenzene	100	ND
1,4-dichlorobenzene	100	ND

ND=not detected


Jon Gabry, PhD
Asst. Organic Lab Manager

JG:na

X-4

Client:

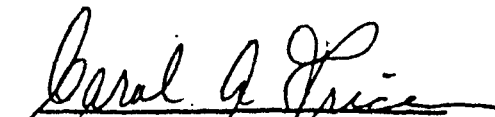
Converse Consultants Inc.
91 Roseland Avenue
Caldwell, N.J. 07006

Date of Report: July 11, 1985
Sample Identification No. 3613-14, 3616, 3618
Date Sample Received: June 21, 1985
Collected From: Air from Monitoring Bldg Wells

601 METHOD

Parameter	Field Blank	Trip Blank	W-1	W-2	MW-2	MW-3	Well-2M	MEN-1
Chloromethane	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Bromomethane	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Dichlorodifluoromethane	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Vinyl Chloride	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Chloroethane	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Methylene Chloride	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Trichlorofluoromethane	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
1,1-Dichloroethene	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
1,1-Dichloroethane	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
trans-1,2-Dichloroethene	<0.010	<0.010	0.140	0.050	0.259	0.348	0.067	0.046
Chloroform	<0.010	<0.010	0.023	<0.010	<0.010	<0.010	<0.010	<0.010
1,2-Dichloroethane	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
1,1,1-Trichloroethane	<0.010	<0.010	0.022	<0.010	0.017	0.011	<0.010	<0.010
Carbon tetrachloride	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Bromodichloromethane	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
1,2-Dichloropropane	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
trans-1,3-Dichloropropene	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Trichloroethene	<0.010	<0.010	2.463	0.066	6.850	2.082	1.115	0.896
Dibromochloromethane	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
1,1,2-Trichloroethane	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
cis-1,3-Dichloropropene	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
2-Chloroethylvinyl ether	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Bromoform	<0.010	<0.010	0.029	<0.010	<0.010	<0.010	<0.010	<0.010
1,1,2,2-Tetrachloroethane	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Tetrachloroethene	<0.010	<0.010	1.050	0.033	3.125	1.672	0.200	0.199
Chlorobenzene	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010

Laboratory Resources Inc.


Carol A. Price
Manager/Laboratory Services

All results expressed in mg/l

X
6 Certification No. 02046

Client:

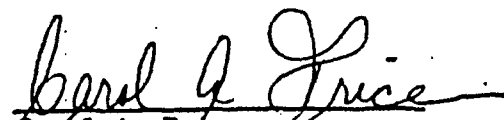
Converse Consultants Inc.
91 Roseland Avenue
Caldwell, N.J. 07006

Date of Report: July 11, 1985
Sample Identification: 3613-14, 3616, 3618
Date Sample Received: June 21, 1985
Collected From: Air From Monitoring Wells

602 METHOD

<u>Parameter</u>	<u>Field Blank</u>	<u>Trip Blank</u>	<u>W-1</u>	<u>W-2</u>	<u>MW-2</u>	<u>MW-3</u>	<u>Well-2M</u>	<u>MEN</u>
Benzene	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.0
Toluene	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0
Ethyl benzene	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0
1,2- Dichlorobenzene	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.0
1,3- Dichlorobenzene	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.01
1,4- Dichlorobenzene	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.01
o- Xylene	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.01
m- Xylene	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.01
p- Xylene	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.01

Laboratory Resources Inc.


Carol A. Price
Manager/Laboratory Services

All results expressed in mg/l

Certification No. 02046

X-1



AIRTRON

200 East Hanover Avenue, Morris Plains, New Jersey 07950 201 539-5500

January 10, 1986

RECEIVED
DIVISION OF
WATER RESOURCES
ENFORCEMENT ELEMENT
JAN 16 9 04 AM '86

Mr. Jeffrey Hoffman
State of New Jersey
Department of Environmental Protection
1259 Route #46
Parsippany, N. J. 07054

Dear Mr. Hoffman:

Enclosed you will find copies of the results of the latest round of samples taken on November 20, 1985. Please call if you have questions regarding this matter.

Very truly yours,

John A. Nicola
John A. Nicola
Plant Engineer

aw

enc.

cc: E. Bukofsky

TABLE 4
SAMPLE I.D. KEY
FOR AIRTRON WELLS

<u>Sample I.D.</u>	<u>Well #</u>
Station A	MEN-1
Station B	Well #1
Station C	MW-2
Station D	Well #2
Station E	2M
Station F	MW-3

Client:

Converse Consultants, Inc.
91 Roseland Avenue
P.O. Box 91
Caldwell, N.J. 07006

601 METHOD

Date of Report: 12/09/85

Sample Identification No. 6187-89, 6191-92

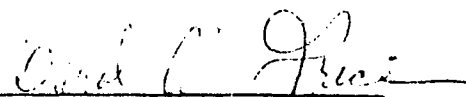
Date Sample Received: 11/22/85

Collected From: Airtron - Well Monitoring

REVISED

<u>Parameter</u>	<u>Station A</u>	<u>Station B</u>	<u>Station C</u>	<u>Station E</u>	<u>Station F</u>
Chloromethane					
Bromomethane					
Dichlorodifluoromethane					
Vinyl Chloride					
Chloroethane					
Methylene Chloride					
Trichlorofluoromethane					
1,1-Dichloroethene					
1,1-Dichloroethane					
trans-1,2-Dichloroethene					
Chloroform					
1,2-Dichloroethane					
1,1,1-Trichloroethane					
Carbon tetrachloride					
Bromodichloromethane					
1,2-Dichloropropane					
trans-1,3-Dichloropropene					
Trichloroethene	1.205	4.629	5.987	1.367	2.188
Dibromochloromethane					
1,1,2-Trichloroethane					
cis-1,3-Dichloropropene					
2-Chloroethylvinyl ether					
Bromoform					
1,1,2,2-Tetrachloroethane					
Tetrachloroethene					
Chlorobenzene					

Laboratory Resources Inc.



Carol A. Price
Manager/Laboratory Services

All results expressed in mg/l

Certification No. 02046

Client:

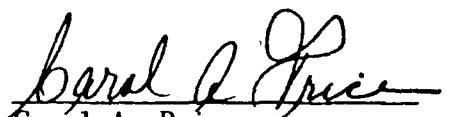
Converse Consultants, Inc.
91 Roseland Avenue
P.O. Box 91
Caldwell, N.J. 07006

Date of Report: 12/09/85
Sample Identification No. 6187-6190
Date Sample Received: 11/22/85
Collected From: Airtron - Well Monitoring

601 METHOD

<u>Parameter</u>	<u>Well MEN-1</u> <u>Station A</u>	<u>Well W-1</u> <u>Station B</u>	<u>Well MW-2</u> <u>Station C</u>	<u>Well W-2</u> <u>Station D</u>
Chloromethane	<0.010	<0.010	<0.010	<0.010
Bromomethane	<0.010	<0.010	<0.010	<0.010
Dichlorodifluoromethane	<0.010	<0.010	<0.010	<0.010
Vinyl Chloride	<0.010	<0.010	<0.010	<0.010
Chloroethane	<0.010	<0.010	<0.010	<0.010
Methylene Chloride	<0.010	<0.010	<0.010	<0.010
Trichlorofluoromethane	<0.010	<0.010	<0.010	<0.010
1,1-Dichloroethene	<0.010	<0.010	<0.010	<0.010
1,1-Dichloroethane	<0.010	<0.010	<0.010	<0.010
trans-1,2-Dichloroethene	0.041	0.271	0.113	0.042
Chloroform	<0.010	0.022	<0.010	<0.010
1,2-Dichloroethane	<0.010	<0.010	<0.010	<0.010
1,1,1-Trichloroethane	<0.010	0.013	<0.010	<0.010
Carbon tetrachloride	<0.010	<0.010	<0.010	<0.010
Bromodichloromethane	<0.010	<0.010	<0.010	<0.010
1,2-Dichloropropane	<0.010	<0.010	<0.010	<0.010
trans-1,3-Dichloropropene	<0.010	<0.010	<0.010	<0.010
Trichloroethene	0.789 (1.205)*	1.104 (4.629)*	1.235 (5.987)*	0.041
Dibromochloromethane	<0.010	<0.010	<0.010	<0.010
1,1,2-Trichloroethane	<0.010	<0.010	<0.010	<0.010
cis-1,3-Dichloropropene	<0.010	<0.010	<0.010	<0.010
2-Chloroethylvinyl ether	<0.010	<0.010	<0.010	<0.010
Bromoform	<0.010	<0.010	<0.010	<0.010
1,1,2,2-Tetrachloroethane	<0.010	<0.010	<0.010	<0.010
Tetrachloroethene	0.204	1.130	1.113	0.031
Chlorobenzene	<0.010	<0.010	<0.010	<0.010

Laboratory Resources Inc.


Carol A. Price
Manager/Laboratory Services

All results expressed in mg/l

Certification No. 02046

Client:

Converse Consultants, Inc.
91 Roseland Avenue
P.O. Box 91
Caldwell, N.J. 07006

Date of Report: 12/09/85

Sample Identification No. 6191-6194

Date Sample Received: 11/22/85

Collected From: Airtron - well Monitoring

601 METHOD

<u>Parameter</u>	<u>Well 2M</u> <u>Station E</u>	<u>Well MW-3</u> <u>Station F</u>	<u>Trip Blank</u>	<u>Field Blank</u>
Chloromethane	<0.010	<0.010	<0.010	<0.010
Bromomethane	<0.010	<0.010	<0.010	<0.010
Dichlorodifluoromethane	<0.010	<0.010	<0.010	<0.010
Vinyl Chloride	<0.010	<0.010	<0.010	<0.010
Chloroethane	<0.010	<0.010	<0.010	<0.010
Methylene Chloride	<0.010	<0.010	<0.010	<0.010
Trichlorofluoromethane	<0.010	<0.010	<0.010	<0.010
1,1-Dichloroethene	<0.010	<0.010	<0.010	<0.010
1,1-Dichloroethane	<0.010	<0.010	<0.010	<0.010
trans-1,2-Dichloroethene	0.092	0.252	<0.010	<0.010
Chloroform	<0.010	<0.010	<0.010	<0.010
1,2-Dichloroethane	<0.010	<0.010	<0.010	<0.010
1,1,1-Trichloroethane	<0.010	<0.010	<0.010	<0.010
Carbon tetrachloride	<0.010	<0.010	<0.010	<0.010
Bromodichloromethane	<0.010	<0.010	<0.010	<0.010
1,2-Dichloropropane	<0.010	<0.010	<0.010	<0.010
trans-1,3-Dichloropropene	<0.010	<0.010	<0.010	<0.010
Trichloroethene	0.740 (1.367)*	0.881 (2.188)*	<0.010	<0.010
Dibromochloromethane	<0.010	<0.010	<0.010	<0.010
1,1,2-Trichloroethane	<0.010	<0.010	<0.010	<0.010
cis-1,3-Dichloropropene	<0.010	<0.010	<0.010	<0.010
2-Chloroethylvinyl ether	<0.010	<0.010	<0.010	<0.010
Bromoform	<0.010	<0.010	<0.010	<0.010
1,1,2,2-Tetrachloroethane	<0.010	<0.010	<0.010	<0.010
Tetrachloroethene	0.295	1.057	<0.010	<0.010
Chlorobenzene	<0.010	<0.010	<0.010	<0.010

Laboratory Resources Inc.


Carol A. Price

Manager/Laboratory Services

All results expressed in mg/l

Certification No. 02046

* Revised valves for trichloroethene received
from Laboratory Resources on 12/16/85



March 28, 1986

Mr. Anthony J. Olivo
Senior Attorney
The Mennen Company
Hanover Avenue
Morristown, New Jersey 07960

Re: Site Environmental Assessment
Future Warehouse Facility
The Mennen Company
Morristown, New Jersey

Dear Mr. Olivo:

This letter report serves to transmit the results of the Environmental Assessment performed on the proposed site to be leased by The Mennen Company for a future warehouse facility opposite your existing facility (Figure 1). This assessment was performed in accordance with Dames & Moore's letter proposal dated February 20, 1986.

The objective of this environmental assessment was to provide an evaluation of the existing conditions at the site to the Mennen Company so that an informed decision may be made on whether to enter a lease agreement for the facility which is planned for the site.

In order to meet this objective within the limited time frame available, the following Site Investigation was performed.

SITE INVESTIGATION

The first phase of activities performed as part of the Site Investigation was the drilling of one soil boring and the drilling and installation of a ground water monitoring well. Drilling and monitoring well installation services were performed by Environmental Drilling, Inc. under Dames & Moore's technical supervision, using a truck-mounted, Mobile-61, rotary wash type drill rig. The soil boring, located directly adjacent to the fuel oil tank farm which borders the site (Figure 2), was sampled at five-foot intervals using a standard split spoon sampler which was advanced by a 140-pound weight falling 30 inches. Each of the soil samples collected were examined carefully for evidence of fuel oil contamination by visual inspection and screening with a portable organic vapor analyzer (OVA). A Dames & Moore geologist also classified each sample and maintained a continuous log of the boring. The log of the boring is shown in Figure 3. Upon completion the boring was grouted to the surface. The ground water monitoring well (MW-10) was installed in accordance with NJDEP specifications for ground water monitoring wells constructed in unconsolidated material. The exact specification of the monitoring wells are illustrated in Figure 3. Following installation, the monitoring well was developed for a period of one hour to remove any drilling mud or fines which remained in the sand pack or in the formation surrounding the well screen.



The next phase of the Site Investigation included the collection of ground water samples from wells W-1, W-2 and MW-10 and the collection of a sediment sample from the creek which passes through the site. The locations of each of these sampling points is illustrated on Figure 2. The original scope of work also called for the collection of a ground water sample from a third USGS well, W-3. However, we were unable to locate this well due to the presence of a thick layer of leaves and snow in the area. Each of the samples were collected in accordance with NJDEP specifications. Prior to ground water sample collection each of the wells was purged of three volumes of water using a stainless steel submersible pump and dedicated polypropylene pipe. The pump was cleaned prior to each use with a non-phosphate detergent solution then rinsed thoroughly with distilled water. The samples were collected using stainless steel bailers. Each bailer was cleaned prior to sampling with a non-phosphate detergent solution, rinsed with distilled water, rinsed with acetone, then rinsed again with distilled water. The sediment sample was collected using a stainless steel trowel which had been cleaned by the same procedure as that used for the bailers.

The final phase of the field investigation included a review of aerial photos of the site dating back to 1940 and a site reconnaissance, performed along the eastern property line of the site and adjacent to Airtron's former sludge-beds.

The review of a series of six aerial photos of the site dating from 1940 to 1980 were carefully examined for evidence of past activities on the site (such as dumping or burial of materials) which may present environmental concerns in the future. No evidence was seen in these aerial photos which would indicate any activity had taken place on the site which would present an environmental concern.

The site reconnaissance was performed on March 5, 1986 by Gerard Coscia, who is a Senior Engineer with Dames & Moore. Mr. Coscia was assisted in performing the reconnaissance by Joel Landes, who is a Senior Chemical Engineer with Dames & Moore. Several traverses of the site were made to identify any evidence of potentially adverse environmental conditions such as discoloration of soils, defoliation of vegetation, mounds, or seeps. A portable organic vapor analyzer (OVA) was used to screen soils uncovered during random shallow soil probing which was conducted throughout the reconnaissance. The areas along the eastern property line of the site and the area adjacent to Airtron's former sludge beds were concentrated on most heavily.

The results of this site reconnaissance revealed no evidence which would indicate environmentally adverse conditions exist at the site other than those indicated by the analytical results of the ground water and brook sediment samples.

RESULTS OF LABORATORY ANALYSIS

Each of the samples collected were delivered to ETC Laboratories for analysis. A full priority pollutant analysis was performed on the ground water samples collected from MW-10 and W-1, as well as on the sediment sample. The sample from MW-10 was also analyzed for total petroleum hydrocarbons. The ground water sample from W-2 was only analyzed for priority pollutant volatile organic compounds. The results of these analyses are summarized on Table 1.



The results of the analysis of the ground water samples show significant concentrations of several volatile organic compounds to be present in the aquifer underlying the site. These volatile compounds include trichloroethylene, tetrachloroethylene, 1,2-trans-dichloroethylene and 1,1,1-trichloroethane. The data are consistent with the results of prior testing conducted by NJDEP.

Insignificant quantities (below method detection limits) of one base/neutral compound and several metals compounds were also detected in the sample from MW-10.

The results of the analysis of the sediment sample (Brook 1) showed significant concentrations of a number of base/neutral compounds, including anthracene, fluoroanthene, fluorene and pyrene. These compounds are commonly associated with coal tar residue. The total concentration of base/neutral compounds is approximately 1 ppm, which is less than typical NJDEP-ECRA cleanup levels (10 ppm). The sediment sample also contained relatively high concentrations of several priority pollutant metals. Concentrations for arsenic and cadmium are in excess of typical NJDEP-ECRA cleanup levels.

SUMMARY

The results of the environmental assessment of this site has revealed one area of potential concern which was not already documented in previous environmental studies in the vicinity of the site. This area of environmental concern relates to the contamination of the sediments of the creek which passes through the site.

The analytical results of the sediment sample showed both metals and base/neutral compounds to be present in the sediments in significant concentrations. The contaminants appear to have entered the creek from some point upstream from the site.

One significant consequence of the presence of these contaminants may involve the additional effort, time and expense of disposal classification testing, handling and proper disposal of any sediments which have to be removed during construction activities on the site. We recommend that dredged stream sediments not be used as fill material. We further recommend that chemical analysis of the stream water be performed if any use of this water is contemplated.

The only other environmental concern identified at the site was the presence of volatile organic compounds in the ground water. The presence of these compounds has already been well-documented and the source has already been identified. The presence of these contaminants will not impair Mennen's use of the site unless ground water pumping for use at the facility is planned.

Both the soil boring adjacent to the tank farm and the site reconnaissance revealed no evidence of any other environmental concerns at the site.

In summary, the Site Assessment did not reveal any significant environmental conditions, except as previously qualified, that would impair Mennen's use of the site for a warehouse facility.

Mr. Anthony J. Olivo
March 28, 1986
Page - 4 -

Dames & Moore



If you have any questions concerning this report, please contact the undersigned.

Very truly yours,

DAMES & MOORE

A handwritten signature in cursive script that reads "Gerard M. Coscia".

Gerard M. Coscia
Senior Engineer

GMC:jp

Attachments

TABLE 1**SUMMARY OF LABORATORY ANALYSIS**

Parameter	MW-10	USGS W-1	USGS W-2	Brook 1	Method Detection Limit	Typical ECRA "Action Levels" or NJDEP Cleanup Levels
<u>Volatile Compounds</u>						
Chloroform	ND	9.87	ND	ND		
Tetrachloroethylene	224	463	26.6	ND		
Toluene	47	ND	ND	ND		
1,2-Trans- dichloroethylene	242	121	59.6	ND		
1,1,1-Trichloroethane	14.3	11.7	ND	ND		
Trichloroethylene	1,270	3,110	54.3	ND		
<u>Base/Neutral Compounds</u>						
Acenaphthene	ND	ND	—	BMDL	63	
Anthracene	ND	ND	—	76.9		
Bis(3-Ethylhexyl) phthalate	BMDL	ND	—	ND	12	
Fluoranthene	ND	ND	—	299		
Fluorene	ND	ND	—	BMDL	63	
Phenanthrene	ND	ND	—	308		
Pyrene	ND	ND	—	245		
<u>Priority Pollutant Metals</u>						
Antimony	ND	ND	—	BMDL	10,000	
Arsenic	ND	ND	—	72,000		20,000
Beryllium	ND	ND	—	1,000		
Cadmium	BMDL	ND	—	5,000	40	3,000
Chromium	ND	ND	—	80,000		100,000
Copper	ND	ND	—	98,000		170,000
Lead	ND	ND	—	84,000		100,000
Nickel	BMDL	ND	—	17,000	10	100,000
Silver	ND	ND	—	4,000		
Zinc	BMDL	ND	—	232,000	9	350,000

Notes:

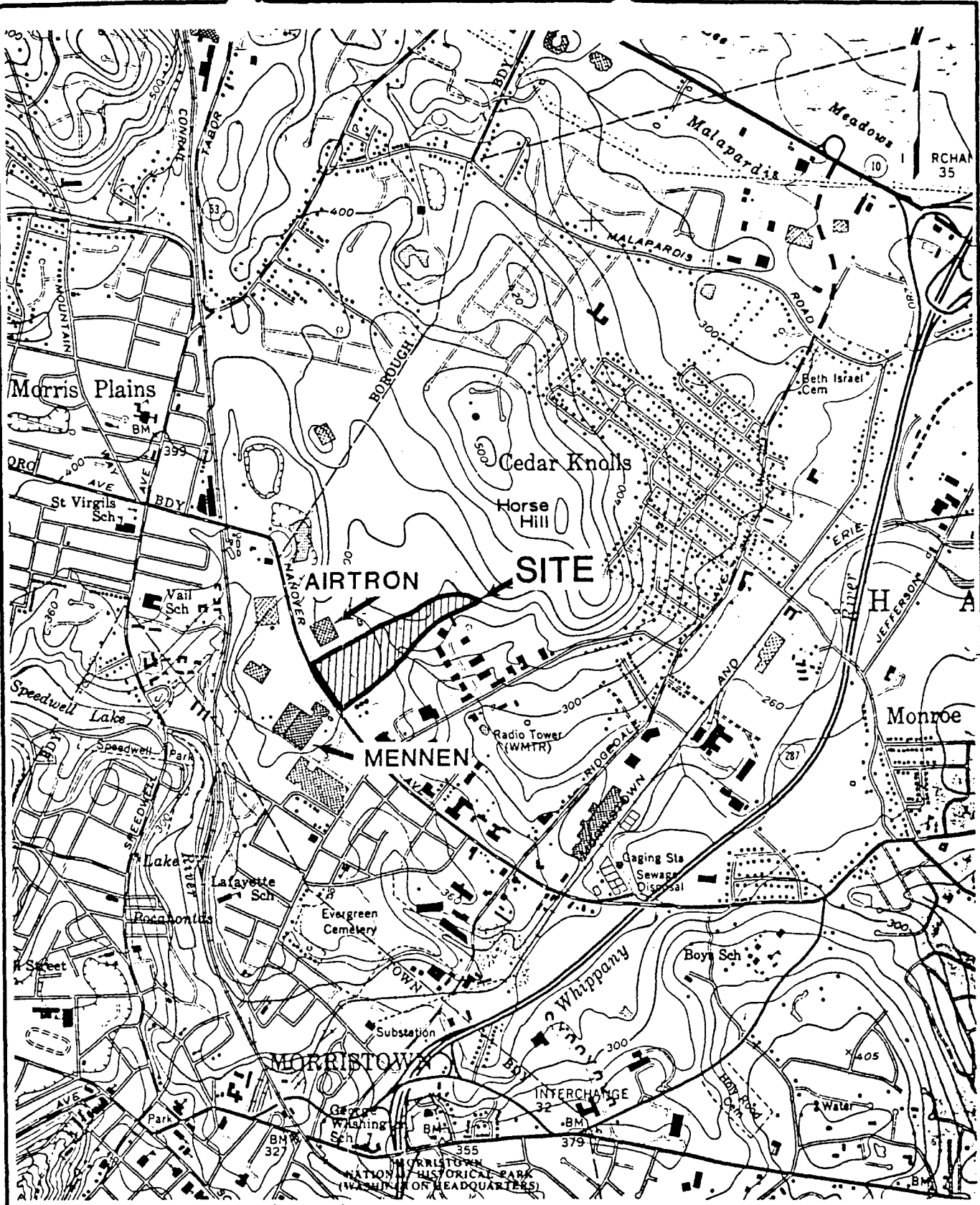
All results reported in parts per billion.

Only compounds detected in one or more samples are included in this summary.

ND = Not detected.

BMDL = Below method detection limit.

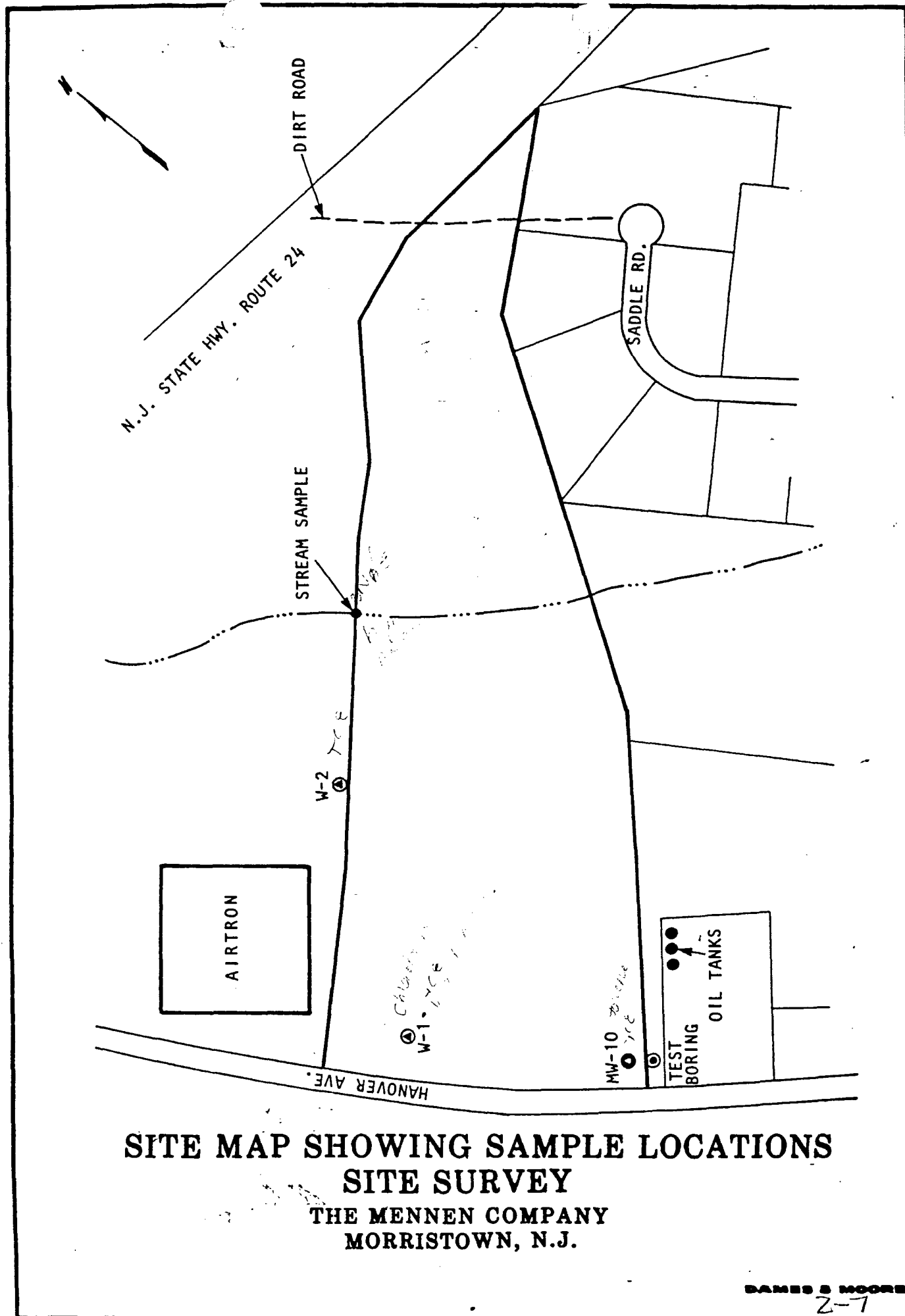
— = Not tested.



SITE LOCATION MAP **THE MENNER COMPANY** **MORRISTOWN, N.J.**

0 2000 4000 FEET

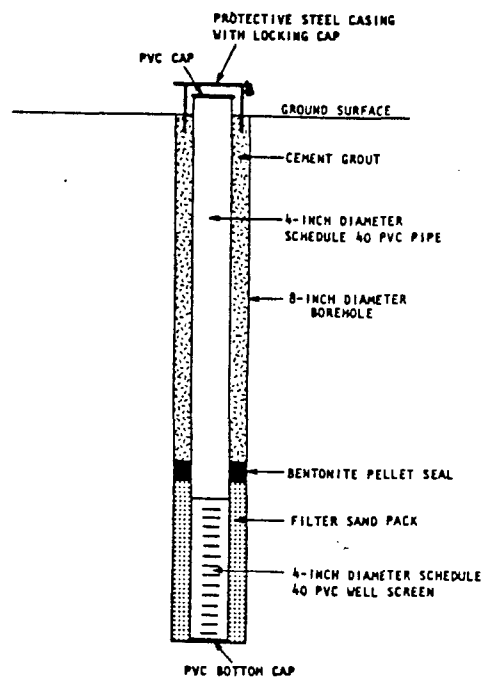
DAMES & MOORE



DEPTH
IN
FEET

BORING MW-10

	SYMBOLS	DESCRIPTIONS
0		SEE LOG OF BORING B-10 FOR STRATIGRAPHIC INFORMATION
10		
20		
30		
40		
50		
60		<ol style="list-style-type: none"> 1. BOREHOLE COMPLETED TO A DEPTH OF 55 FEET ON 3/1/86. 2. BORING CONVERTED TO A 4" MONITORING WELL ON 3/1/86. (SEE WELL CONSTRUCTION DETAILS)



DEPTH
IN
FEET

BORING B-10

BLOW COUNT	SYMBOLS	DESCRIPTIONS
0		
44	ML CL	ORANGE-BROWN CLAYEY SILT, TRACE FINE SAND, INTERBEDDED WITH GRAY SILTY CLAY, TRACE GRAVEL AND COBBLES
10	CL ML	REDDISH BROWN SILTY CLAY TO CLAYEY SILT, TRACE FINE TO MEDIUM SAND
46	SM	GRADING WITH TRACE TO LITTLE FINE TO COARSE SAND, TRACE GRAVEL, TRACE COBBLE
20	SP ML	REDDISH BROWN FINE SILTY SAND, TRACE COBBLES, TRACE GRAVEL
94	SM	GRAY TO ORANGE-BROWN VERY FINE TO FINE SAND WITH TRACE SILT
30	SM	BROWN SILT WITH TRACE VERY FINE SAND
65		BROWN TO LIGHT BROWN FINE SILTY SAND WITH FINE LAMINATIONS OF RED-BROWN CLAY, TRACE GRAVEL
82		GRAY-BROWN FINE TO COARSE SAND, TRACE GRAVEL, TRACE SILT
40	SP	GRADING SATURATED
52		
50		
69		
60		<ol style="list-style-type: none"> 1. BORING COMPLETED TO A DEPTH OF 57 FEET ON 2/28/86. 2. BORING GROUTED TO THE SURFACE ON 2/28/86.

LOG OF BORINGS AND MONITORING WELL DETAILS

NOTES:

1. THE FIGURES IN THE COLUMN LABELED "BLOW COUNT" REFER TO THE NUMBER OF BLOWS REQUIRED TO DRIVE A STANDARD SPLIT-SPOON SAMPLER A DISTANCE OF ONE FOOT USING A 140 POUND DRIVE WEIGHT FALLING 30 INCHES. THE STANDARD SPLIT-SPOON SAMPLER IS 2" O.D. AND 1-3/8" I.D.
2. THE DISCUSSION IN THE TEXT OF THE REPORT IS NECESSARY FOR A PROPER UNDERSTANDING OF THE NATURE OF THE SUBSURFACE MATERIALS.

Dames & Moore

MAJOR DIVISIONS			GRAPHIC SYMBOL	LETTER SYMBOL	TYPICAL DESCRIPTIONS
COARSE GRAINED SOILS 					

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS

UNIFIED SOIL CLASSIFICATION SYSTEM

DAMES & MOORE ²⁻⁹



Airtron

RECEIVED
DIVISION OF
WATER RESOURCES
ENFORCEMENT ELEMENT

200 East Hanover Avenue, Morris Plains, New Jersey 07950 201-539-5500

AUG 11 10 45 AM '86

August 6, 1986

Mr. Jeffrey Hoffman
State of New Jersey
Department of Environmental Protection
1259 Route #46
Parsippany, N. J. 07054

Dear Mr. Hoffman:

Enclosed you will find copies of the results of the latest round of samples taken on June 11, 1986 along with a table showing comparisons with previous values and water table elevation data.

Please call if you have questions regarding this matter.

Very truly yours,

John A. Nicola

John A. Nicola
Plant Engineer

aw

cc: JLoSchiavo
E. Bukofsky

AA-1



ACCUTEST
LABORATORIES

578 LIVINGSTON AVENUE • NORTH BRUNSWICK, N.J. 08902 • (201) 249-0100

RECEIVED

JUL 16 1986

CONVERSE ENVIRONMENTAL EAST
CALDWELL, N.J.

TO: Converse Environmental East
91 Roseland Avenue
Post Office Box 291
Caldwell, New Jersey 07006

ATTN: Don Smith

DATE: 7-16-86
JOB No.: 86-2249
P. O. No.: 83-07204-04
SAMPLE RECEIVED: 6-12-86/1:15PM

ANALYSIS REPORT

Sample No.	Date Collected	Time Collected	Collected By	Point of Collection
1922	6-11-86	11:00	PK/WD	Water sample-2M, 59.5', Bailer

VOLATILE ORGANIC ANALYSIS

EPA 601,602

Lab ID# 12129

	RESULT(ug/l)	MDL(ug/l)
01) Benzene	ND	1.0
02) Bromoform	ND	1.0
03) Bromodichloromethane	ND	1.0
04) Bromomethane	ND	1.0
05) Carbon tetrachloride	ND	1.0
06) Chlorobenzene	ND	1.0
07) Chloroethane	ND	1.0
08) 2-Chloroethyl Vinyl Ether	ND	1.0
09) Chloroform	12	1.0
10) Chloromethane	ND	1.0
11) cis-1,3-Dichloropropene	ND	1.0
12) Dibromochloromethane	ND	1.0
13) Dichlorodifluoromethane	ND	1.0
14) 1,1-Dichloroethane	ND	1.0
15) 1,2-Dichloroethane	ND	1.0
16) 1,1-Dichloroethylene	ND	1.0
17) trans-1,2-Dichloroethylene	49	1.0
18) trans-1,3-Dichloropropene	ND	1.0
19) 1,2-Dichloropropane	ND	1.0
20) Ethylbenzene	ND	1.0
21) Methylene chloride	ND	1.0
22) 1,1,2,2-Tetrachloroethane	ND	1.0
23) Tetrachloroethylene	113	1.0
24) Toluene	18	1.0
25) 1,1,1-Trichloroethane	7.0	1.0
26) 1,1,2-Trichloroethane	ND	1.0
27) Trichloroethylene	574	1.0
28) Trichlorofluoromethane	ND	1.0
29) Vinyl chloride	ND	1.0

ND = Non Detectable

MDL = Method Detection Limit

Vincent J. Pugliese
ENV. LAB. MGR.

AA-2

**ACCUTEST**

L A B O R A T O R I E S

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TO: Converse Environmental East
91 Roseland Avenue
Post Office Box 291
Caldwell, New Jersey 07006

ATTN: Don Smith

DATE: 7-16-86
JOB No.: 86-2249
P. O. No.: 83-07204-04
SAMPLE RECEIVED: 6-12-86/1:15PM

ANALYSIS REPORT

Sample No.	Date Collected	Time Collected	Collected By	Point of Collection
1923	6-11-86	12:00	PK/WD	Water sample-MW-2, 60.5', Bailer

VOLATILE ORGANIC ANALYSIS

EPA 601,602

Lab ID# 12129

	RESULT(ug/l)	MDL(ug/l)
01) Benzene	ND	1.0
02) Bromoform	ND	1.0
03) Bromodichloromethane	ND	1.0
04) Bromomethane	ND	1.0
05) Carbon tetrachloride	ND	1.0
06) Chlorobenzene	ND	1.0
07) Chloroethane	ND	1.0
08) 2-Chloroethyl Vinyl Ether	ND	1.0
09) Chloroform	ND	1.0
10) Chloromethane	ND	1.0
11) cis-1,3-Dichloropropene	ND	1.0
12) Dibromochloromethane	ND	1.0
13) Dichlorodifluoromethane	ND	1.0
14) 1,1-Dichloroethane	ND	1.0
15) 1,2-Dichloroethane	ND	1.0
16) 1,1-Dichloroethylene	ND	1.0
17) trans-1,2-Dichloroethylene	123	1.0
18) trans-1,3-Dichloropropene	ND	1.0
19) 1,2-Dichloropropane	ND	1.0
20) Ethylbenzene	ND	1.0
21) Methylene chloride	ND	1.0
22) 1,1,2,2-Tetrachloroethane	ND	1.0
23) Tetrachloroethylene	438	1.0
24) Toluene	92	1.0
25) 1,1,1-Trichloroethane	9.8	1.0
26) 1,1,2-Trichloroethane	ND	1.0
27) Trichloroethylene	1536	1.0
28) Trichlorofluoromethane	ND	1.0
29) Vinyl chloride	ND	1.0

ND = Non Detectable

MDL = Method Detection Limit

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TO: Converse Environmental East
91 Roseland Avenue
Post Office Box 291
Caldwell, New Jersey 07006

ATTN: Don Smith

DATE: 7-16-86
JOB No.: 86-2249
P. O. No.: 83-07204-04
SAMPLE RECEIVED: 6-12-86/1:15PM

ANALYSIS REPORT

Sample No.	Date Collected	Time Collected	Collected By	Point of Collection
1924	6-11-86	1315	PK/WD	Water sample-MW-3, 46.0', Bailer

VOLATILE ORGANIC ANALYSIS

EPA 601,602

Lab ID# 12129

	RESULT(ug/l)	MDL(ug/l)
01) Benzene	ND	1.0
02) Bromoform	ND	1.0
03) Bromodichloromethane	ND	1.0
04) Bromomethane	ND	1.0
05) Carbon tetrachloride	ND	1.0
06) Chlorobenzene	ND	1.0
07) Chloroethane	ND	1.0
08) 2-Chloroethyl Vinyl Ether	ND	1.0
09) Chloroform	ND	1.0
10) Chloromethane	ND	1.0
11) cis-1,3-Dichloropropene	ND	1.0
12) Dibromochloromethane	ND	1.0
13) Dichlorodifluoromethane	ND	1.0
14) 1,1-Dichloroethane	ND	1.0
15) 1,2-Dichloroethane	ND	1.0
16) 1,1-Dichloroethylene	ND	1.0
17) trans-1,2-Dichloroethylene	208	1.0
18) trans-1,3-Dichloropropene	ND	1.0
19) 1,2-Dichloropropane	ND	1.0
20) Ethylbenzene	ND	1.0
21) Methylene chloride	ND	1.0
22) 1,1,2,2-Tetrachloroethane	ND	1.0
23) Tetrachloroethylene	442	1.0
24) Toluene	44	1.0
25) 1,1,1-Trichloroethane	16	1.0
26) 1,1,2-Trichloroethane	ND	1.0
27) Trichloroethylene	783	1.0
28) Trichlorofluoromethane	ND	1.0
29) Vinyl chloride	ND	1.0

ND = Non Detectable

MDL = Method Detection Limit

AA-4
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TO: Converse Environmental East
91 Roseland Avenue
Post Office Box 291
Caldwell, New Jersey 07006

ATTN: Don Smith

DATE: 7-16-86
JOB No.: 86-2249
P. O. No.: 83-07204-04
SAMPLE RECEIVED: 6-12-86/1:15PM

ANALYSIS REPORT

Sample No.	Date Collected	Time Collected	Collected By	Point of Collection
1925	6-11-86	1430	PK/WD	Water sample-Mer-2

VOLATILE ORGANIC ANALYSIS

EPA 601,602

Lab ID# 12129

	RESULT(ug/l)	MDL(ug/l)
01) Benzene	ND	1.0
02) Bromoform	ND	1.0
03) Bromodichloromethane	ND	1.0
04) Bromomethane	ND	1.0
05) Carbon tetrachloride	ND	1.0
06) Chlorobenzene	ND	1.0
07) Chloroethane	ND	1.0
08) 2-Chloroethyl Vinyl Ether	ND	1.0
09) Chloroform	ND	1.0
10) Chloromethane	ND	1.0
11) cis-1,3-Dichloropropene	ND	1.0
12) Dibromochloromethane	ND	1.0
13) Dichlorodifluoromethane	ND	1.0
14) 1,1-Dichloroethane	ND	1.0
15) 1,2-Dichloroethane	ND	1.0
16) 1,1-Dichloroethylene	ND	1.0
17) trans-1,2-Dichloroethylene	32	1.0
18) trans-1,3-Dichloropropene	ND	1.0
19) 1,2-Dichloropropane	ND	1.0
20) Ethylbenzene	ND	1.0
21) Methylene chloride	ND	1.0
22) 1,1,2,2-Tetrachloroethane	ND	1.0
23) Tetrachloroethylene	4.1	1.0
24) Toluene	ND	1.0
25) 1,1,1-Trichloroethane	ND	1.0
26) 1,1,2-Trichloroethane	ND	1.0
27) Trichloroethylene	398	1.0
28) Trichlorofluoromethane	ND	1.0
29) Vinyl chloride	ND	1.0

ND = Non Detectable

MDL = Method Detection Limit

AA-5
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TO: Converse Environmental East
91 Roseland Avenue
Post Office Box 291
Caldwell, New Jersey 07006

ATTN: Don Smith

DATE: 7-16-86
JOB No.: 86-2249
P. O. No.: 83-07204-04
SAMPLE RECEIVED: 6-12-86/1:15PM

ANALYSIS REPORT

Sample No.	Date Collected	Time Collected	Collected By	Point of Collection
1926	6-11-86	1510	PK/WD	Water sample-W-1, 56.7', pump

VOLATILE ORGANIC ANALYSIS

EPA 601,602

Lab ID# 12129

	RESULT(ug/l)	MDL(ug/l)
01) Benzene	ND	1.0
02) Bromoform	ND	1.0
03) Bromodichloromethane	ND	1.0
04) Bromomethane	ND	1.0
05) Carbon tetrachloride	ND	1.0
06) Chlorobenzene	ND	1.0
07) Chloroethane	ND	1.0
08) 2-Chloroethyl Vinyl Ether	ND	1.0
09) Chloroform	ND	1.0
10) Chloromethane	ND	1.0
11) cis-1,3-Dichloropropene	ND	1.0
12) Dibromochloromethane	ND	1.0
13) Dichlorodifluoromethane	ND	1.0
14) 1,1-Dichloroethane	ND	1.0
15) 1,2-Dichloroethane	ND	1.0
16) 1,1-Dichloroethylene	ND	1.0
17) trans-1,2-Dichloroethylene	25	1.0
18) trans-1,3-Dichloropropene	ND	1.0
19) 1,2-Dichloropropane	ND	1.0
20) Ethylbenzene	ND	1.0
21) Methylene chloride	ND	1.0
22) 1,1,2,2-Tetrachloroethane	ND	1.0
23) Tetrachloroethylene	119	1.0
24) Toluene	5.9	1.0
25) 1,1,1-Trichloroethane	ND	1.0
26) 1,1,2-Trichloroethane	ND	1.0
27) Trichloroethylene	609	1.0
28) Trichlorofluoromethane	ND	1.0
29) Vinyl chloride	ND	1.0

ND = Non Detectable

MDL = Method Detection Limit

AA-6
Vincent J. Pugliese
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TO: Converse Environmental East
91 Roseland Avenue
Post Office Box 291
Caldwell, New Jersey 07006

ATTN: Don Smith

DATE: 7-16-86
JOB No.: 86-2249
P. O. No.: 83-07204-04
SAMPLE RECEIVED: 6-12-86/1:15PM

ANALYSIS REPORT

Sample No.	Date Collected	Time Collected	Collected By	Point of Collection
1927	6-11-86	1540	PK/WD	Water sample-W-2, 48.5', pump

VOLATILE ORGANIC ANALYSIS

EPA 601,602

Lab ID# 12129

	RESULT(ug/l)	MDL(ug/l)
01) Benzene	ND	1.0
02) Bromoform	ND	1.0
03) Bromodichloromethane	ND	1.0
04) Bromomethane	ND	1.0
05) Carbon tetrachloride	ND	1.0
06) Chlorobenzene	ND	1.0
07) Chloroethane	ND	1.0
08) 2-Chloroethyl Vinyl Ether	ND	1.0
09) Chloroform	ND	1.0
10) Chloromethane	ND	1.0
11) cis-1,3-Dichloropropene	ND	1.0
12) Dibromochloromethane	ND	1.0
13) Dichlorodifluoromethane	ND	1.0
14) 1,1-Dichloroethane	ND	1.0
15) 1,2-Dichloroethane	ND	1.0
16) 1,1-Dichloroethylene	ND	1.0
17) trans-1,2-Dichloroethylene	38	1.0
18) trans-1,3-Dichloropropene	ND	1.0
19) 1,2-Dichloropropane	ND	1.0
20) Ethylbenzene	ND	1.0
21) Methylene chloride	ND	1.0
22) 1,1,2,2-Tetrachloroethane	ND	1.0
23) Tetrachloroethylene	14	1.0
24) Toluene	ND	1.0
25) 1,1,1-Trichloroethane	ND	1.0
26) 1,1,2-Trichloroethane	ND	1.0
27) Trichloroethylene	44	1.0
28) Trichlorofluoromethane	ND	1.0
29) Vinyl chloride	ND	1.0

ND = Non Detectable

MDL = Method Detection Limit

Vincent J. Pugliese
ENV. LAB. MGR.

**ACCUTEST**

LABORATORIES

578 LIVINGSTON AVENUE • NORTH BRUNSWICK, N.J. 08902 • (201) 249-0100

TO: Converse Environmental East
91 Roseland Avenue
Post Office Box 291
Caldwell, New Jersey 07006

ATTN: Don Smith

DATE: 86-16-86
JOB No.: 86-2249
P. O. No.: 83-07204-04
SAMPLE RECEIVED: 6-12-86/1:15PM

ANALYSIS REPORT

Sample No.	Date Collected	Time Collected	Collected By	Point of Collection
1928	6-11-86	1550	PK/WD	Water sample-Field Blank

VOLATILE ORGANIC ANALYSIS

EPA 601,602

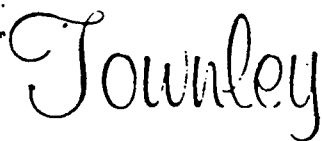
Lab ID# 12129

	RESULT(ug/l)	MDL(ug/l)
01) Benzene	ND	1.0
02) Bromoform	ND	1.0
03) Bromodichloromethane	ND	1.0
04) Bromomethane	ND	1.0
05) Carbon tetrachloride	ND	1.0
06) Chlorobenzene	ND	1.0
07) Chloroethane	ND	1.0
08) 2-Chloroethyl Vinyl Ether	ND	1.0
09) Chloroform	ND	1.0
10) Chloromethane	ND	1.0
11) cis-1,3-Dichloropropene	ND	1.0
12) Dibromochloromethane	ND	1.0
13) Dichlorodifluoromethane	ND	1.0
14) 1,1-Dichloroethane	ND	1.0
15) 1,2-Dichloroethane	ND	1.0
16) 1,1-Dichloroethylene	ND	1.0
17) trans-1,2-Dichloroethylene	ND	1.0
18) trans-1,3-Dichloropropene	ND	1.0
19) 1,2-Dichloropropane	ND	1.0
20) Ethylbenzene	ND	1.0
21) Methylene chloride	ND	1.0
22) 1,1,2,2-Tetrachloroethane	ND	1.0
23) Tetrachloroethylene	ND	1.0
24) Toluene	ND	1.0
25) 1,1,1-Trichloroethane	ND	1.0
26) 1,1,2-Trichloroethane	ND	1.0
27) Trichloroethylene	ND	1.0
28) Trichlorofluoromethane	ND	1.0
29) Vinyl chloride	ND	1.0

ND = Non Detectable

MDL = Method Detection Limit

AR-8
Vincent J. Pugliese
ENV. LAB. M. GR.



RESEARCH AND CONSULTING, INC.

CHEMISTRY • MICROBIOLOGY
RELATED SCIENCES

1750 W. FRONT STREET, PLAINFIELD, N. J. 07063 • (201) 757-1137

June 18, 1986

Airtron
200 East Hanover Ave.
Morris Plains, NJ 07950

Attn: John Nicola

Gentlemen:

Herewith our findings for the analysis of six samples of water, picked up by us
on June 11, 1986:

TRC Sample:	6068	6069	6070	6071	6072	6073
Source:	<u>2M</u>	<u>MW-2</u>	<u>MW-3</u>	<u>Mennon #2</u>	<u>W-1</u>	<u>W-2</u>
<u>PURGEABLE HALOCARBONS</u> (Volatile Chlorinated Hydrocarbons), ppb.						
Bromoform	nd	nd	nd	nd	nd	nd
Bromodichloromethane	nd	nd	nd	nd	nd	nd
Bromomethane	nd	nd	nd	nd	nd	nd
Carbon Tetrachloride	nd	nd	nd	nd	nd	nd
Chlorobenzene	nd	nd	nd	nd	nd	nd
Chloroethane	nd	nd	nd	nd	nd	nd
2-Chloroethylvinyl Ether	nd	nd	nd	nd	nd	nd
Chloroform	14	nd	nd	2	4	nd
Chloromethane	nd	nd	nd	nd	nd	nd
Dibromochloromethane	nd	nd	nd	nd	nd	nd
1,2-Dichlorobenzene	nd	nd	nd	nd	nd	nd
1,3-Dichlorobenzene	nd	nd	nd	nd	nd	nd
1,4-Dichlorobenzene	nd	nd	nd	nd	nd	nd
Dichlorodifluoromethane	nd	nd	nd	nd	nd	nd
1,1-Dichloroethane	nd	nd	nd	nd	nd	nd
1,2-Dichloroethane	nd	nd	nd	nd	nd	nd
1,1-Dichloroethene	2	nd	nd	nd	4	nd
trans-1,2-Dichloroethene	93	305	52	72	94	98
cis-1,3-Dichloropropene	nd	nd	nd	nd	nd	nd
1,2-Dichloropropane	nd	nd	nd	nd	nd	nd

Continued on page 2

Townley Research & Consulting, Inc.

TRC Sample:	6068	6069	6070	6071	6072	6073
Source:	<u>2M</u>	<u>MW-2</u>	<u>MW-3</u>	<u>Mennon #2</u>	<u>W-1</u>	<u>W-2</u>

PURGEABLE HALOCARBONS
(Volatile Chlorinated
Hydrocarbons), ppb.


trans-1,3-Dichloropropene	nd	nd	nd	nd	nd	nd
Methylene Chloride	nd	nd	nd	nd	nd	nd
1,1,2,2-Tetrachloroethane	nd	nd	nd	nd	nd	nd
Tetrachloroethylene	186	1130	370	6	220	22
1,1,1-Trichloroethane	4	nd	nd	nd	3	nd
1,1,2-Trichloroethane	nd	nd	nd	nd	nd	nd
Trichloroethylene	470	1490	540	432	368	52
Trichlorofluoromethane	nd	nd	nd	nd	nd	nd
Vinyl Chloride	nd	nd	nd	nd	nd	nd

PURGEABLE AROMATICS
(Volatile Hydrocarbons), ppb.

Benzene	nd	nd	nd	nd	nd	nd
Ethylbenzene	nd	nd	nd	nd	nd	nd
Toluene	46	62	47	nd	19	38

Note: nd = none detected

Detection Limits: Purgeable Halocarbons - 1 ppb.
Purgeable Aromatics - 1 ppb.

Very truly yours,

Mark Andersen
Lab Manager

AA-40

CHEMICAL TEST RESULTS FOR
VOLATILE ORGANIC COMPOUNDS
IN SOIL SAMPLES

TABLE 6

ALL RESULTS IN ug/kg

SAMPLE NUMBER	B-101.8	B-102.1	B-102.3	B-102.4	B-103.1	B-103.3	B-103.6	B-104.1	B-104.2
SAMPLE DEPTH (FT)	40.0-40.5	4.0-6.0	14.0-16.0	19.0-21.0	4.0-6.0	14.0-16.0	29.5-30.0	5.0-5.5	10.0-10.5
SAMPLE DATE	5/26/87	5/27/87	5/27/87	5/27/87	5/28/87	5/28/87	5/28/87	5/28/87	5/28/87
COMPOUND									
VINYL CHLORIDE	ND	ND	ND	ND	ND	ND	ND	ND	ND
METHYLENE CHLORIDE	3 JB	4 JB	5 JB	4 JB	5 JB	7 JB	5 JB	23 B	2 JB
TRICHLOROFLUOROMETHANE	3 JB	3 JB	3 JB	3 JB	13 JB	4 JB	3 JB	5 JB	5 JB
1,1-DICHLOROETHENE	ND	0 JB	ND	ND	ND	ND	ND	ND	ND
TRANS-1,2,-DICHLOROETHENE	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROFORM	ND	1 J	ND	ND	ND	ND	ND	ND	1 J
1,1,1-TRICHLOROETHANE	ND	2 JB	2 JB	2 JB	3 J	2 JB	1 JB	3 JB	2 J
1,2-DICHLOROPROPANE	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRICHLOROETHYLENE	ND	1 J	1 J	ND	ND	ND	ND	ND	ND
BENZENE	ND	1 JB	1 JB	0 JB	ND	ND	ND	ND	ND
1,1,2-TRICHLOROETHANE	ND	ND ND	ND	ND	ND	ND	ND	ND	ND
TETRACHLOROETHYLENE	1 JB	1 JB	1 JB	0 JB	ND	1 JB	ND	ND	ND
TOLUENE	2 JB	2 JB	2 JB	ND	4 JB	2 JB	2 JB	2 JB	2 JB
ETHYL BENZENE	ND	1 JB	ND	ND	ND	ND	ND	ND	ND
TOTAL XYLENES	ND	ND	ND	ND	ND	1 J	ND	ND	ND
TOTAL VOLATILES	9	16	15	9	25	17	11	33	12
LIBRARY SEARCH (VO)	ND	25	ND	ND	240	60	100	ND	20

ND - Not detected

Table continued on next page...

BB-1

CHEMICAL TEST RESULTS FOR
VOLATILE ORGANIC COMPOUNDS
IN SOIL SAMPLES

TABLE 6 cont.

ALL RESULTS IN ug/kg

SAMPLE NUMBER	B-104.7	B-105.10	B-106.8	B-107.7	B-107.8	B-107.10	B-108.2	B-108.9	B-109.7
SAMPLE DEPTH (FT)	35.0-35.5	50.0-50.5	40.0-40.5	34.5-35.0	39.5-40.0	50.0-50.5	9.5-10.0	45.0-45.5	35.0-35.5
SAMPLE DATE	5/28/87	5/29/87	6/4/87	6/1/87	6/1/87	6/1/87	6/3/87	6/3/87	6/4/87
COMPOUND									
VINYL CHLORIDE	ND	ND	ND	ND	ND	ND	ND	ND	ND
METHYLENE CHLORIDE	3 JB	1 JB	2 JB	5 JB	3 JB	1 JB	1 JB	2 JB	4 JB
TRICHLOROFLUOROMETHANE	7 JB	ND	ND	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHENE	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRANS-1,2,-DICHLOROETHENE	ND	ND	3 J	ND	ND	ND	ND	1 J	ND
CHLOROFORM	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-TRICHLOROETHANE	2 J	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROPROPANE	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRICHLOROETHYLENE	ND	1 J	39	1 J	4 J	5 J	ND	18	28
BENZENE	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-TRICHLOROETHANE	ND	ND	ND	ND	ND	ND	ND	ND	ND
TETRACHLOROETHYLENE	ND	2 J	21	1 J	3 J	8 J	ND	19	6 J
TOLUENE	ND	ND	2 JB	1 JB	ND	2 JB	ND	ND	ND
ETHYL BENZENE	ND	ND	ND	ND	ND	ND	ND	ND	ND
TOTAL XYLENES	ND	ND	ND	ND	ND	ND	ND	ND	ND
TOTAL VOLATILES	12	4	67	8	10	16	1	40	38
LIBRARY SEARCH (VO)	40	20	ND	ND	20	15	20	ND	ND

ND - Not detected

Table continued on next page...

BB-2

CHEMICAL TEST RESULTS FOR
VOLATILE ORGANIC COMPOUNDS
IN SOIL SAMPLES

TABLE 6 cont.

ALL RESULTS IN ug/kg

SAMPLE NUMBER	B-109.10	B-109.11	B-110.6A	B-110.6B	B-110.11	B-111.9	B-111.10	B-111.11	B-112.1
SAMPLE DEPTH (FT)	50.0-50.5	55.0-55.5	30.0-30.5	30.0-30.5	55.0-55.5	45.0-45.5	50.0-50.5	55.0-55.5	4.5-5.0
SAMPLE DATE	6/4/87	6/4/87	6/5/87	6/5/87	6/8/87	6/8/87	6/8/87	6/8/87	6/9/87
COMPOUND									
VINYL CHLORIDE	ND	ND	ND	ND	ND	ND	ND	ND	ND
METHYLENE CHLORIDE	ND	1 JB	2 JB	1 JB	6 JB	ND	ND	ND	13 B
TRICHLOROFLUOROMETHANE	ND	3 JB	3 JB	3 JB	8 JB	3 JB	10 JB	7 JB	8 JB
1,1-DICHLOROETHENE	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRANS-1,2,-DICHLOROETHENE	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROFORM	ND	ND	ND	ND	ND	ND	1 J	ND	ND
1,1,1-TRICHLOROETHANE	ND	1 JB	8 J	8 J	ND	ND	ND	ND	2 J
1,2-DICHLOROPROPANE	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRICHLOROETHYLENE	ND	30	3 J	2 J	ND	4 J	5 J	4 J	ND
BENZENE	ND	ND	ND	ND	ND	ND	1 J	ND	ND
1,1,2-TRICHLOROETHANE	ND	ND	ND	ND	ND	ND	1 J	ND	ND
TETRACHLOROETHYLENE	ND	11	ND	ND	3 J	3 J	3 J	3 J	ND
TOLUENE	2 JB	2 JB	ND	ND	2 JB	2 JB	2 JB	ND	1 JB
ETHYL BENZENE	ND	ND	ND	ND	ND	ND	ND	ND	ND
TOTAL XYLENES	ND	ND	ND	ND	ND	ND	ND	ND	ND
TOTAL VOLATILES	2	48	16	14	19	12	23	14	24
LIBRARY SEARCH (VO)	ND	ND	ND	ND	51	ND	ND	ND	ND

ND - Not detected

Table continued on next page...

BB-3

TABLE 6 cont.

CHEMICAL TEST RESULTS FOR
VOLATILE ORGANIC COMPOUNDS
IN SOIL SAMPLES

ALL RESULTS IN ug/kg

SAMPLE NUMBER	B-112.9	B-112.11	B-113.10	B-114.3	B-114.4	B-114.7	B-115.2	B-115.5	B-115.7
SAMPLE DEPTH (FT)	45.0-45.5	55.0-55.5	50.5-51.0	14.0-14.5	20.0-20.5	29.5-30.0	10.5-11.0	25.5-26.0	35.0-35.5
SAMPLE DATE	6/9/87	6/9/87	6/10/87	6/10/87	6/10/87	6/10/87	6/11/87	6/11/87	6/11/87
COMPOUND									
VINYL CHLORIDE	ND	ND ND	ND	10 J	ND	ND	ND	ND	ND
METHYLENE CHLORIDE	19 J	22 B	38 B	8 JB	9 JB	19 B	11 JB	17 JB	21 B
TRICHLOROFLUOROMETHANE	ND	8 JB	9 JB	13 B	13 JB	11 JB	4 JB	5 JB	8 JB
1,1-DICHLOROETHENE	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRANS-1,2,-DICHLOROETHENE	ND	ND	ND	81	3 J	95	41	4 J	13
CHLOROFORM	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-TRICHLOROETHANE	3 J	3 J	3 J	3 J	ND	1 JB	1 JB	ND	ND
1,2-DICHLOROPROPANE	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRICHLOROETHYLENE	6 J	ND	6 J	43	5 J	9 J	ND	2 J	ND
BENZENE	ND	ND	0 J	ND	ND	ND	ND	ND	ND
1,1,2-TRICHLOROETHANE	ND	ND	ND	ND	ND	ND	ND	ND	ND
TETRACHLOROETHYLENE	2 J	1 J	2 J	60	67	150 B	2 JB	2 JB	4 J
TOLUENE	1 JB	1 JB	2 JB	2 J	2 J	3 JB	4 JB	4 JB	7 J
ETHYL BENZENE	ND	ND	ND	ND	ND	ND	ND	ND	ND
TOTAL XYLENES	ND	ND	ND	ND	ND	ND	ND	ND	ND
TOTAL VOLATILES	31	35	60	220	99	288	63	34	53
LIBRARY SEARCH (VO)	34	20	190	ND	224	310	ND	ND	ND

ND - Not detected

Table continued on next page...

B3-4

CHEMICAL TEST RESULTS FOR
VOLATILE ORGANIC COMPOUNDS
IN SOIL SAMPLES

TABLE 6 cont.

ALL RESULTS IN ug/kg

SAMPLE NUMBER	B-116.8	B-117.1A	B-117.4	B-117.7	B-118.4	B-118.8	B-118.9	B-119.1	B-119.4
SAMPLE DEPTH (FT)	40.0-40.5	4.5-5.0	20.0-20.5	35.0-35.5	20.0-20.5	39.5-40.0	44.5-45.0	5.0-5.5	19.5-20.0
SAMPLE DATE	6/11/87	6/11/87	6/11/87	6/11/87	6/15/87	6/15/87	6/15/87	6/15/87	6/15/87
COMPOUND									
VINYL CHLORIDE	ND	ND	ND	ND	ND	ND	ND	ND	ND
METHYLENE CHLORIDE	2 JB	220 J	2 JB	2 JB	3 J	3 J	16 JB	22 B	19 B
TRICHLOROFLUOROMETHANE	8 JB	520 JB	11 JB	8 JB	12 B	12 B	ND	10 JB	10 JB
1,1-DICHLOROETHENE	ND	ND	ND	ND	7 J	6 J	ND	ND	ND
TRANS-1,2,-DICHLOROETHENE	3 J	1,900	8 J	5 J	8 J	2 J	53	ND	ND
CHLOROFORM	ND	91 J	ND	ND	ND	ND	ND	ND	ND
1,1,1-TRICHLOROETHANE	ND	ND	1 J	ND	10 J	6 J	ND	1 J	1 J
1,2-DICHLOROPROPANE	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRICHLOROETHYLENE	11 J	740 J	3 J	4 J	13	9 J	74	ND	ND
BENZENE	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-TRICHLOROETHANE	ND	5,800	ND	ND	ND	ND	ND	ND	ND
TETRACHLOROETHYLENE	35	ND	16	29	7 J	15	55	ND	5 J
TOLUENE	11	8,700	25	11	2 JB	2 JB	ND	2 J	2 J
ETHYL BENZENE	ND	340 J	ND	ND	ND	ND	ND	ND	1 JB
TOTAL XYLENES		1,400			ND	ND	ND	ND	ND
TOTAL VOLATILES	70	19,711	66	59	62	55	198	35	38
LIBRARY SEARCH (VO)	ND	2,000	20	ND	140 B	150 B	490 B	220 B	220 B

ND - Not detected

Table continued on next page...

CHEMICAL TEST RESULTS FOR
VOLATILE ORGANIC COMPOUNDS
IN SOIL SAMPLES

TABLE 6 cont.

ALL RESULTS IN ug/kg

SAMPLE NUMBER	B-119.7	B-120.4	B-121.5A	B-122.4	B-122.6	B-122.7
SAMPLE DEPTH (FT)	34.0-36.0	19.5-20.0	24.5-25.0	19.0-19.5	29.0-29.5	34.5-35.0
SAMPLE DATE	6/15/87	6/17/87	6/17/87	6/17/87	6/17/87	6/17/87
COMPOUND						
VINYL CHLORIDE	ND	ND	ND	ND	ND	ND
METHYLENE CHLORIDE	22 B	9 JB	9 JB	8 JB	12 JB	10 JB
TRICHLOROFLUOROMETHANE	10 JB	4 JB	2 JB	3 JB	4 JB	5 JB
1,1-DICHLOROETHENE	ND	ND	ND	ND	ND	ND
TRANS-1,2,-DICHLOROETHENE	ND	ND	ND	2 J	ND	16
CHLOROFORM	ND	ND	ND	ND	ND	ND
1,1,1-TRICHLOROETHANE	ND	ND	ND	1 J	ND	ND
1,2-DICHLOROPROPANE	ND	ND	5 J	ND	ND	ND
TRICHLOROETHYLENE	5 J	ND	ND	4 J	2 J	78
BENZENE	ND	ND	ND	ND	ND	ND
1,1,2-TRICHLOROETHANE	ND	ND	ND	ND	ND	ND
TETRACHLOROETHYLENE	29	ND	ND	52	4 J	150
TOLUENE	2 J	2 J	2 J	2 J	2 J	1 J
ETHYL BENZENE	ND	1 JB	ND	ND	1 JB	ND
TOTAL XYLENES	ND	ND	ND	ND	ND	ND
TOTAL VOLATILES	68	16	18	72	25	260
LIBRARY SEARCH (VO)	250 B	ND	ND	ND	ND	ND

ND - Not detected

Table continued on next page...

BB-6

CHEMICAL TEST RESULTS FOR
VOLATILE ORGANIC COMPOUNDS
IN WATER BLANKS

TABLE 6 cont.

RESULTS FOR WATER BLANKS IN ug/L

SAMPLE NUMBER	TRIP BLANK	TRIP BLANK	TRIP BLANK	TRIP BLANK	TRIP BLANK	TRIP BLANK	TRIP BLANK	TRIP BLANK	TRIP BLANK	TRIP BLANK
SAMPLE DATE	5/26/87	5/27/87	5/28/87	5/29/87	6/1/87	6/3/87	6/4/87	6/5/87	6/8/87	6/9/87
COMPOUND										
VINYL CHLORIDE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
METHYLENE CHLORIDE	2 JB	6 JB	7 J	5 J	5 JB	4 JB	2 J	4 J	8 JB	ND
TRICHLOROFLUOROMETHANE	ND	3 JB	ND	ND	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRANS-1,2,-DICHLOROETHENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROFORM	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-TRICHLOROETHANE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROPROPANE	4 J	2 J	2 J	3 J	ND	3 J	3 J	ND	ND	ND
TRICHLOROETHYLENE	ND	ND	ND	ND	2 J	ND	ND	ND	ND	ND
BENZENE	ND	0 J	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-TRICHLOROETHANE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TETRACHLOROETHYLENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TOLUENE	2 JB	2 JB	2 JB	1 JB	5 J	ND	ND	1 J	2 J	ND
ETHYL BENZENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TOTAL XYLENES	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TOTAL VOLATILES	8	13	11	9	12	7	5	5	10	0
LIBRARY SEARCH (VO)	ND	ND	ND	ND	140	20	ND	ND	ND	11

ND - Not detected

Table continued on next page...

BB-7

CHEMICAL TEST RESULTS FOR
VOLATILE ORGANIC COMPOUNDS
IN WATER BLANKS

TABLE 6 cont.

RESULTS FOR WATER BLANKS IN ug/l

SAMPLE NUMBER	TRIP BLANK	TRIP BLANK	TRIP BLANK	TRIP BLANK
SAMPLE DATE	6/10/87	6/11/87	6/15/87	6/17/87
COMPOUND				
VINYL CHLORIDE	ND	ND	ND	ND
METHYLENE CHLORIDE	1,100 B	4,300 B	5,500 B	4 B
TRICHLOROFLUOROMETHANE	ND	ND	ND	ND
1,1-DICHLOROETHENE	ND	ND	ND	ND
TRANS-1,2,-DICHLOROETHENE	ND	ND	ND	ND
CHLOROFORM	ND	ND	ND	ND
1,1,1-TRICHLOROETHANE	ND	ND	ND	ND
1,2-DICHLOROPROPANE	ND	ND	ND	5 J
TRICHLOROETHYLENE	ND	ND	ND	ND
BENZENE	ND	ND	ND	ND
1,1,2-TRICHLOROETHANE	ND	ND	ND	ND
TETRACHLOROETHYLENE	ND	ND	ND	ND
TOLUENE	ND	56 JB	68 JB	2 J
ETHYL BENZENE	ND	ND	ND	ND
TOTAL XYLENES	ND	ND	ND	ND
 TOTAL VOLATILES	 1,100	 4,356	 5,568	 11
 LIBRARY SEARCH (VO)	 ND	 ND	 ND	 ND

ND - Not detected

Table continued on next page...

13B-8

TABLE 7

AIRTRON 87-47400-01

CHEMICAL TEST RESULTS FOR
BASE NEUTRAL AND
ACID EXTRACTABLE
COMPOUNDS IN SOIL SAMPLES

ALL RESULTS IN ug/kg

SAMPLE NUMBER	B-103.1	B-104.1
SAMPLE DEPTH (FT)	4.0-6.0	5.0-5.5
SAMPLE DATE	5/28/87	5/28/87

BASE NEUTRALS:		
DI-N-BUTYL PHTHALATE	2,150 B	3,140 B

ACID EXTRACTABLES:		
NO COMPOUNDS DETECTED	ND	ND

ND - Not detected

ROUND 1 - GROUNDWATER ANALYSES

TABLE 8

CHEMICAL TEST RESULTS FOR
VOLATILE ORGANIC COMPOUNDS
IN WATER SAMPLES

ALL RESULTS IN ug/L

SAMPLE NUMBER:	MW-1	MW-2	MW-2M	MW-3	MW-201	MW-202	MW-203	MW-204	MW-205	MW-206	MW-412	USGS-1
SAMPLE DATE:	8/18/87	8/18/87	8/19/87	8/18/87	8/17/87	8/17/87	8/18/87	8/18/87	8/18/87	8/17/87	8/17/87	8/17/87
PARAMETER:												
METHYLENE CHLORIDE	9 B	580 J	ND	1,200 B	8 B	ND	ND	190 B	ND	ND	ND	ND
1,1-DICHLOROETHENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	2 J	2 J	5 J
1,1-DICHLOROETHANE	ND	ND	ND	ND	ND	ND	ND	ND	ND	3 J	3 J	3 J
TRICHLOROETHYLENE	ND	7,200	2,000	2,000	ND	ND	ND	ND	32	3,300 D	3,200 D	9,000 D
CHLOROFORM	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	19
1,1,1-TRICHLOROETHANE	ND	ND	ND	ND	ND	ND	ND	ND	ND	14	15	28
TETRACHLOROETHYLENE	ND	3,000	530	1,500	ND	ND	ND	ND	ND	2,000 D	2,000 D	2,900 D
TRICHLOROLFLUOROMETHANE	ND	ND	ND	ND	ND	ND	ND	ND	ND	1 J	ND	1 J
TRANS-1,2-DICHLOROETHENE	ND	180 J	180 J	230 J	ND	ND	ND	ND	ND	510 D	480 D	520 D
TOLUENE	1 JB	94 JB	ND	96 JB	ND	ND	ND	1 J	1 JB	ND	1 JB	ND
TOTAL VOLATILES	10	11,054	2,710	5,026	8	0	0	191	33	5,830	5,701	12,476
LIBRARY SEARCH	13	ND	ND	ND	ND	ND	ND	ND	ND	28	6	53

ND - Not detected

D - Dilution factor of 50.

Table continued next page...

B-10

ROUND 1 - GROUNDWATER ANALYSES

TABLE 8 cont.

CHEMICAL TEST RESULTS FOR
VOLATILE ORGANIC COMPOUNDS
IN WATER SAMPLES

ALL RESULTS IN ug/l

SAMPLE NUMBER:	USGS-2	USGS-3	USGS-6	MENN-10	MENN PROD-1	TRIP	TRIP
SAMPLE DATE:	8/17/87	8/18/87	8/18/87	8/17/87	8/18/87	8/18/87	8/17/87
PARAMETER:							
METHYLENE CHLORIDE	12	11 B	14 B	ND	650 B	ND	ND
1,1-DICHLOROETHENE	ND	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHANE	ND	ND	ND	ND	ND	ND	ND
TRICHLOROETHYLENE	46	ND	4 J	1,300 D	1,100	5 JB	ND
CHLOROFORM	ND	ND	ND	ND	ND	ND	ND
1,1,1-TRICHLOROETHANE	ND	ND	ND	6	ND	ND	ND
TETRACHLOROETHYLENE	26	ND	4 J	450 D	180 J	5 JB	ND
TRICHLOROLFLUOROMETHANE	4 J	ND	ND	2 J	ND	ND	ND
TRANS-1,2-DICHLOROETHENE	36	ND	ND	230 J	53 J	ND	ND
TOLUENE	ND	ND	1 JB	ND	90 JB	ND	ND
TOTAL VOLATILES	124	11	23	1,988	2,073	10	0
LIBRARY SEARCH	37	ND	ND	90	ND	9	9

ND - Not detected

D - Dilution factor of 50.

J, B, C, D, E, F, G, H, I, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000, 1001, 1002, 1003, 1004, 1005, 1006, 1007, 1008, 1009, 1010, 1011, 1012, 1013, 1014, 1015, 1016, 1017, 1018, 1019, 1020, 1021, 1022, 1023, 1024, 1025, 1026, 1027, 1028, 1029, 1030, 1031, 1032, 1033, 1034, 1035, 1036, 1037, 1038, 1039, 1040, 1041, 1042, 1043, 1044, 1045, 1046, 1047, 1048, 1049, 1050, 1051, 1052, 1053, 1054, 1055, 1056, 1057, 1058, 1059, 1060, 1061, 1062, 1063, 1064, 1065, 1066, 1067, 1068, 1069, 1070, 1071, 1072, 1073, 1074, 1075, 1076, 1077, 1078, 1079, 1080, 1081, 1082, 1083, 1084, 1085, 1086, 1087, 1088, 1089, 1090, 1091, 1092, 1093, 1094, 1095, 1096, 1097, 1098, 1099, 1100, 1101, 1102, 1103, 1104, 1105, 1106, 1107, 1108, 1109, 1110, 1111, 1112, 1113, 1114, 1115, 1116, 1117, 1118, 1119, 1120, 1121, 1122, 1123, 1124, 1125, 1126, 1127, 1128, 1129, 1130, 1131, 1132, 1133, 1134, 1135, 1136, 1137, 1138, 1139, 1140, 1141, 1142, 1143, 1144, 1145, 1146, 1147, 1148, 1149, 1150, 1151, 1152, 1153, 1154, 1155, 1156, 1157, 1158, 1159, 1160, 1161, 1162, 1163, 1164, 1165, 1166, 1167, 1168, 1169, 1170, 1171, 1172, 1173, 1174, 1175, 1176, 1177, 1178, 1179, 1180, 1181, 1182, 1183, 1184, 1185, 1186, 1187, 1188, 1189, 1190, 1191, 1192, 1193, 1194, 1195, 1196, 1197, 1198, 1199, 1200, 1201, 1202, 1203, 1204, 1205, 1206, 1207, 1208, 1209, 1210, 1211, 1212, 1213, 1214, 1215, 1216, 1217, 1218, 1219, 1220, 1221, 1222, 1223, 1224, 1225, 1226, 1227, 1228, 1229, 1230, 1231, 1232, 1233, 1234, 1235, 1236, 1237, 1238, 1239, 1240, 1241, 1242, 1243, 1244, 1245, 1246, 1247, 1248, 1249, 1250, 1251, 1252, 1253, 1254, 1255, 1256, 1257, 1258, 1259, 1260, 1261, 1262, 1263, 1264, 1265, 1266, 1267, 1268, 1269, 1270, 1271, 1272, 1273, 1274, 1275, 1276, 1277, 1278, 1279, 1280, 1281, 1282, 1283, 1284, 1285, 1286, 1287, 1288, 1289, 1290, 1291, 1292, 1293, 1294, 1295, 1296, 1297, 1298, 1299, 1300, 1301, 1302, 1303, 1304, 1305, 1306, 1307, 1308, 1309, 1310, 1311, 1312, 1313, 1314, 1315, 1316, 1317, 1318, 1319, 1320, 1321, 1322, 1323, 1324, 1325, 1326, 1327, 1328, 1329, 1330, 1331, 1332, 1333, 1334, 1335, 1336, 1337, 1338, 1339, 1340, 1341, 1342, 1343, 1344, 1345, 1346, 1347, 1348, 1349, 1350, 1351, 1352, 1353, 1354, 1355, 1356, 1357, 1358, 1359, 1360, 1361, 1362, 1363, 1364, 1365, 1366, 1367, 1368, 1369, 1370, 1371, 1372, 1373, 1374, 1375, 1376, 1377, 1378, 1379, 1380, 1381, 1382, 1383, 1384, 1385, 1386, 1387, 1388, 1389, 1390, 1391, 1392, 1393, 1394, 1395, 1396, 1397, 1398, 1399, 1400, 1401, 1402, 1403, 1404, 1405, 1406, 1407, 1408, 1409, 1410, 1411, 1412, 1413, 1414, 1415, 1416, 1417, 1418, 1419, 1420, 1421, 1422, 1423, 1424, 1425, 1426, 1427, 1428, 1429, 1430, 1431, 1432, 1433, 1434, 1435, 1436, 1437, 1438, 1439, 1440, 1441, 1442, 1443, 1444, 1445, 1446, 1447, 1448, 1449, 1450, 1451, 1452, 1453, 1454, 1455, 1456, 1457, 1458, 1459, 1460, 1461, 1462, 1463, 1464, 1465, 1466, 1467, 1468, 1469, 1470, 1471, 1472, 1473, 1474, 1475, 1476, 1477, 1478, 1479, 1480, 1481, 1482, 1483, 1484, 1485, 1486, 1487, 1488, 1489, 1490, 1491, 1492, 1493, 1494, 1495, 1496, 1497, 1498, 1499, 1500, 1501, 1502, 1503, 1504, 1505, 1506, 1507, 1508, 1509, 1510, 1511, 1512, 1513, 1514, 1515, 1516, 1517, 1518, 1519, 1520, 1521, 1522, 1523, 1524, 1525, 1526, 1527, 1528, 1529, 1530, 1531, 1532, 1533, 1534, 1535, 1536, 1537, 1538, 1539, 1540, 1541, 1542, 1543, 1544, 1545, 1546, 1547, 1548, 1549, 1550, 1551, 1552, 1553, 1554, 1555, 1556, 1557, 1558, 1559, 1560, 1561, 1562, 1563, 1564, 1565, 1566, 1567, 1568, 1569, 1570, 1571, 1572, 1573, 1574, 1575, 1576, 1577, 1578, 1579, 1580, 1581, 1582, 1583, 1584, 1585, 1586, 1587, 1588, 1589, 1590, 1591, 1592, 1593, 1594, 1595, 1596, 1597, 1598, 1599, 1600, 1601, 1602, 1603, 1604, 1605, 1606, 1607, 1608, 1609, 1610, 1611, 1612, 1613, 1614, 1615, 1616, 1617, 1618, 1619, 1620, 1621, 1622, 1623, 1624, 1625, 1626, 1627, 1628, 1629, 1630, 1631, 1632, 1633, 1634, 1635, 1636, 1637, 1638, 1639, 1640, 1641, 1642, 1643, 1644, 1645, 1646, 1647, 1648, 1649, 1650, 1651, 1652, 1653, 1654, 1655, 1656, 1657, 1658, 1659, 1660, 1661, 1662, 1663, 1664, 1665, 1666, 1667, 1668, 1669, 1670, 1671, 1672, 1673, 1674, 1675, 1676, 1677, 1678, 1679, 1680, 1681, 1682, 1683, 1684, 1685, 1686, 1687, 1688, 1689, 1690, 1691, 1692, 1693, 1694, 1695, 1696, 1697, 1698, 1699, 1700, 1701, 1702, 1703, 1704, 1705, 1706, 1707, 1708, 1709, 1710, 1711, 1712, 1713, 1714, 1715, 1716, 1717, 1718, 1719, 1720, 1721, 1722, 1723, 1724, 1725, 1726, 1727, 1728, 1729, 1730, 1731, 1732, 1733, 1734, 1735, 1736, 1737, 1738, 1739, 1740, 1741, 1742, 1743, 1744, 1745, 1746, 1747, 1748, 1749, 1750, 1751, 1752, 1753, 1754, 1755, 1756, 1757, 1758, 1759, 1760, 1761, 1762, 1763, 1764, 1765, 1766, 1767, 1768, 1769, 1770, 1771, 1772, 1773, 1774, 1775, 1776, 1777, 1778, 1779, 1780, 1781, 1782, 1783, 1784, 1785, 1786, 1787, 1788, 1789, 1790, 1791, 1792, 1793, 1794, 1795, 1796, 1797, 1798, 1799, 1800, 1801, 1802, 1803, 1804, 1805, 1806, 1807, 1808, 1809, 1810, 1811, 1812, 1813, 1814, 1815, 1816, 1817, 1818, 1819, 1820, 1821, 1822, 1823, 1824, 1825, 1826, 1827, 1828, 1829, 1830, 1831, 1832, 1833, 1834, 1835, 1836, 1837, 1838, 1839, 1840, 1841, 1842, 1843, 1844, 1845, 1846, 1847, 1848, 1849, 1850, 1851, 1852, 1853, 1854, 1855, 1856, 1857, 1858, 1859, 1860, 1861, 1862, 1863, 1864, 1865, 1866, 1867, 1868, 1869, 1870, 1871, 1872, 1873, 1874, 1875, 1876, 1877, 1878, 1879, 1880, 1881, 1882, 1883, 1884, 1885, 1886, 1887, 1888, 1889, 1890, 1891, 1892, 1893, 1894, 1895, 1896, 1897, 1898, 1899, 1900, 1901, 1902, 1903, 1904, 1905, 1906, 1907, 1908, 1909, 1910, 1911, 1912, 1913, 1914, 1915, 1916, 1917, 1918, 1919, 1920, 1921, 1922, 1923, 1924, 1925, 1926, 1927, 1928, 1929, 1930, 1931, 1932, 1933, 1934, 1935, 1936, 1937, 1938, 1939, 1940, 1941, 1942, 1943, 1944, 1945, 1946, 1947, 1948, 1949, 1950, 1951, 1952, 1953, 1954, 1955, 1956, 1957, 1958, 1959, 1960, 1961, 1962, 1963, 1964, 1965, 1966, 1967, 1968, 1969, 1970, 1971, 1972, 1973, 1974, 1975, 1976, 1977, 1978, 1979, 1980, 1981, 1982, 1983, 1984, 1985, 1986, 1987, 1988, 1989, 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019,

AIRTRON 87-47400-01

TABLE 9

ROUND 1 - GROUNDWATER ANALYSES

CHEMICAL TEST RESULTS FOR
BASE NEUTRAL COMPOUNDS
IN WATER SAMPLES

ALL RESULTS IN ug/L

SAMPLE NUMBER:	MW-1	MW-2	MW-2H	MW-3	MW-201	MW-202	MW-203	MW-204	MW-205	MW-206	MW-412	USGS-1
SAMPLE DATE:	8/18/87	8/18/87	8/19/87	8/18/87	8/17/87	8/17/87	8/18/87	8/18/87	8/18/87	8/17/87	8/17/87	8/17/87
PARAMETER:												
BIS(2-ETHYLYHEXYL) PHTHALATE	11 JB	ND	ND	8 JB	ND	ND	ND	ND	ND	ND	ND	ND
DI-N-OCTYL PHTHALATE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DI-N-BUTYL PHTHALATE	ND	ND	ND	ND	2 J	ND	ND	ND	ND	ND	ND	ND
DIETHYL PHTHALATE	ND	ND	2 J	ND	ND	ND	ND	ND	20 J	5 J	ND	ND
TOTAL BASE NEUTRALS	11	0	2	8	2	0	0	0	20	5	0	0
LIBRARY SEARCH (B/A/N)	1,300	ND	ND	29	ND	ND	ND	ND	ND	ND	ND	ND

ND- Not detected

Table continued next page...

AIRTRON 87-47400-01

TABLE 9 cont.

ROUND 1 - GROUNDWATER ANALYSES

CHEMICAL TEST RESULTS FOR
BASE NEUTRAL COMPOUNDS
IN WATER SAMPLES

ALL RESULTS IN ug/L

SAMPLE NUMBER:	USGS-2	USGS-3	USGS-6	MENN-10	MENN PROD-1	TRIP	TRIP
SAMPLE DATE:	8/17/87	8/18/87	8/18/87	8/17/87	8/18/87	8/18/87	8/17/87
PARAMETER:							
BIS(2-ETHYLYHEXYL) PHTHALATE	ND	16 JB	ND	6 JB	ND	ND	ND
DI-N-OCTYL PHTHALATE	ND	ND	ND	ND	ND	ND	ND
DI-N-BUTYL PHTHALATE	ND	ND	ND	ND	ND	ND	ND
DIETHYL PHTHALATE	ND	ND	ND	ND	ND	ND	ND
TOTAL BASE NEUTRALS	0	16	0	6	0	0	0
LIBRARY SEARCH (B/A/N)	13	ND	ND	ND	ND	ND	ND

ND- Not detected

5,85,000

Table continued next page...

BE-14

AIRTRON 87-47400-01

TABLE 10

ROUND 1 - GROUNDWATER ANALYSES

CHEMICAL TEST RESULTS FOR
ACID EXTRACTABLE COMPOUNDS
IN WATER SAMPLES

ALL RESULTS IN ug/L

SAMPLE NUMBER:	MW-1	MW-2	MW-2H	MW-3	MW-201	MW-202	MW-203	MW-204	MW-205	MW-206	MW-412	USGS-1
SAMPLE DATE:	8/18/87	8/18/87	8/19/87	8/18/87	8/17/87	8/17/87	8/18/87	8/18/87	8/18/87	8/17/87	8/17/87	8/17/87

PARAMETER:

No Compounds Detected	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
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ND - Not detected

BB-15 Table continued next page...

AIRTRON 87-47400-01

TABLE 10 cont.

ROUND 1 - GROUNDWATER ANALYSES

CHEMICAL TEST RESULTS FOR
ACID EXTRACTABLE COMPOUNDS
IN WATER SAMPLES

ALL RESULTS IN ug/L

SAMPLE NUMBER:	USGS-2	USGS-3	USGS-6	MENN-10	MENN PROD-1	TRIP	TRIP
SAMPLE DATE:	8/17/87	8/18/87	8/18/87	8/17/87	8/18/87	8/18/87	8/17/87

PARAMETER:

No Compounds Detected	ND	ND	ND	ND	ND	ND	ND
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ND - Not detected

BB-16 Table continued next page...

AIRTRON 87-47400-01

TABLE 11

ROUND 1 - GROUNDWATER ANALYSES

CHEMICAL TEST RESULTS FOR
PESTICIDES/PCB'S
IN WATER SAMPLES

ALL RESULTS IN ug/l

SAMPLE NUMBER:	MW-1	MW-2	MW-2M	MW-3	MW-201	MW-202	MW-203	MW-204	MW-205	MW-206	MW-412	USGS-1
SAMPLE DATE:	8/18/87	8/18/87	8/19/87	8/18/87	8/17/87	8/17/87	8/18/87	8/18/87	8/18/87	8/17/87	8/17/87	8/17/87
PARAMETER:												
No compounds detected	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ND - Not detected												

Table continued next page...

B3-17

AIRTRON 87-47400-01

TABLE 11 cont.

ROUND 1 - GROUNDWATER ANALYSES

CHEMICAL TEST RESULTS FOR
PESTICIDES/PCB'S
IN WATER SAMPLES

ALL RESULTS IN ug/L

SAMPLE NUMBER:	USGS-2	USGS-3	USGS-6	MENN-10	MENN PROD-1	TRIP	TRIP
SAMPLE DATE:	8/17/87	8/18/87	8/18/87	8/17/87	8/18/87	8/18/87	8/17/87

PARAMETER:

No compounds detected	ND	ND	ND	ND	ND	ND	ND
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ND - Not detected

Table continued next page...

BB-18

ROUND 1 - GROUNDWATER ANALYSES

TABLE 12

CHEMICAL TEST RESULTS FOR
METALS, CYANIDE & PHENOLS
IN WATER SAMPLES

ALL RESULTS IN UG/L

SAMPLE NUMBER:		MW-1	MW-2	MW-2M	MW-3	MW-201	MW-202	MW-203	MW-204	MW-205	MW-206	MW-412	USGS-1
SAMPLE DATE:		8/18/87	8/18/87	8/19/87	8/18/87	8/17/87	8/17/87	8/18/87	8/18/87	8/18/87	8/17/87	8/17/87	8/17/87
ANALYTE	NJDEP GUIDELINES*												
ANTIMONY	---	<60	<60	<60	<60	<60	<60	<60	<60	<60	<60	<60	<60
ARSENIC	50	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
BERYLLIUM	---	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
CADMIUM	10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
CHROMIUM	50	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
COPPER	1,000	<30	<30	<30	<30	<25	<25	<30	<30	<30	<25	<25	<25
LEAD	50	<5.0	<5.0	<5.0	<5.0	8.2	<5.0	6	<5.0	<5.0	<5.0	<5.0	<5.0
MERCURY	2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NICKEL	---	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
SELENIUM	10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
SILVER	50	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
THALLIUM	---	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
ZINC	5,000	<20	<20	<20	<30	34	27	<20	<20	<20	99	106	32
CYANIDE	200	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
PHENOLS	---	<5	11	<5	<5	<5	<5	<5	9	<5	<5	<5	97

* - Used informally in evaluating
possible cleanup requirements.

BB-19
Table continued next page...

ROUND 1 - GROUNDWATER ANALYSES

TABLE 12 cont.

CHEMICAL TEST RESULTS FOR
METALS, CYANIDE & PHENOLS
IN WATER SAMPLES

ALL RESULTS IN UG/L

SAMPLE NUMBER:		USGS-2	USGS-3	USGS-6	MENN-10	MENN PROD-1	Q-001	TRIP	TRIP
SAMPLE DATE:		8/17/87	8/18/87	8/18/87	8/17/87	8/18/87	8/18/87	8/18/87	8/17/87
ANALYTE		NJDEP GUIDELINES*							
ANTIMONY	---	<60	<60	<60	<60	<60	<60	<60	<60
ARSENIC	50	<10	<10	<10	<10	<10	<10	<10	<10
BERYLLIUM	---	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
CADMIUM	10	<10	<10	<10	<10	<10	<10	<10	<10
CHROMIUM	50	<10	<10	<10	<10	<10	<10	<10	<10
COPPER	1,000	<25	<30	<30	<25	110	<30	<30	<30
LEAD	50	<5.0	<5.0	<5.0	<5.0	23	<5.0	<5.0	<5.0
MERCURY	2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NICKEL	---	<40	<40	<40	<40	40	<40	<40	<40
SELENIUM	10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
SILVER	50	<10	<10	<10	<10	<10	<10	<10	<10
THALLIUM	---	<10	<10	<10	<10	<10	<10	<10	<10
ZINC	5,000	111	<30	<20	90	130	<20	<20	<20
CYANIDE	200	<5	<5	<5	<5	<5	<5	<5	<5
PHENOLS	---	6	36	<5	<5	<5	<5	<5	<5

* - Used informally in evaluating
possible cleanup requirements.

Table continued next page...

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ROUND 2 - GROUNDWATER ANALYSES

TABLE 13

CHEMICAL TEST RESULTS FOR
VOLATILE ORGANIC COMPOUNDS
IN WATER SAMPLES

ALL RESULTS IN ug/l

SAMPLE NUMBER	MW-1	MW-2	MW-2M	MW-3	MW-6	MW-201	MW-202	MW-203	MW-204	MW-205	MW-206
SAMPLE DATE:	10/1/87	10/1/87	10/1/87	9/30/87	10/1/87	10/1/87	9/30/87	9/30/87	9/30/87	10/1/87	10/1/87
PARAMETER											
METHYLENE CHLORIDE	ND	1,900	410	136 JB	3 JB	ND	6 B	5 B	100 B	ND	2,600
1,1-DICHLOROETHENE	ND	ND	ND	ND	1 J	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHANE	ND	ND	ND	ND	1 J	ND	ND	ND	ND	ND	ND
TRICHLOROETHYLENE	1 JB	6,700 B	1,800	2,564	2,500 DB	ND	ND	ND	ND	43 B	3,200 B
CHLOROFORM	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-TRICHLOROETHANE	ND	ND	ND	ND	10	1 JB	ND	ND	ND	ND	ND
TETRACHLOROETHYLENE	1 JB	2,900 B	520 B	2,153	2,000 DB	1 JB	ND	ND	ND	1 JB	2,500 B
TRICHLOROLFLUOROMETHANE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRANS-1,2-DICHLOROETHENE	ND	180 J	ND	287	300 D	ND	ND	ND	ND	ND	510
TOLUENE	1 JB	ND	50 JB	152 JB	2 JB	ND	3 J	2 J	4 J	ND	ND
TOTAL P.P. VOLATILES	3	11,680	2,780	5,292	4,817	2	9	7	104	44	8,810
LIBRARY SEARCH	ND	950	ND	770	5	ND	6	6	15	ND	2,000

ND - Not detected

D - Dilution factor of 50.

Table continued next page...

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ROUND 2 - GROUNDWATER ANALYSES

TABLE 13 cont.

CHEMICAL TEST RESULTS FOR
VOLATILE ORGANIC COMPOUNDS
IN WATER SAMPLES

ALL RESULTS IN ug/l

SAMPLE NUMBER	MW-408	USGS-1	USGS-2	USGS-3	MENN-10	MENN PROD-1	TRIP	TRIP
SAMPLE DATE:	10/1/87	9/30/87	9/30/87	9/30/87	10/1/87	10/1/87	9/30/87	10/1/87
PARAMETER:								
METHYLENE CHLORIDE	50 B	110 J	ND	2 JB	740	110	3 JB	11
1,1-DICHLOROETHENE	ND	ND	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHANE	ND	ND	ND	ND	ND	ND	ND	ND
TRICHLOROETHYLENE	ND	8,850	25	1 JB	1,800 B	1,200 JB	ND	ND
CHLOROFORM	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-TRICHLOROETHANE	ND	ND	ND	ND	ND	ND	ND	ND
TETRACHLOROETHYLENE	ND	3,240	11	1 JB	620 B	200 JB	1 JB	ND
TRICHLOROLFLUOROMETHANE	ND	ND	2 J	ND	ND	ND	ND	ND
TRANS-1,2-DICHLOROETHENE	ND	635	37	ND	310	60 J	ND	ND
TOLUENE	1 JB	86 J	1 J	1 JB	55 JB	140 JB	1 JB	1 JB
TOTAL P.P. VOLATILES	51	12,921	76	5	3,525	1,710	5	12
LIBRARY SEARCH	5	940	9	ND	300	ND	6	ND

ND - Not detected

D - Dilution factor of 50.

Table continued next page...

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TABLE 14

AIRTRON 87-47400-01

ROUND 2 - GROUNDWATER ANALYSES

CHEMICAL TEST RESULTS FOR
BASE NEUTRAL COMPOUNDS
IN WATER SAMPLES

ALL RESULTS IN ug/L

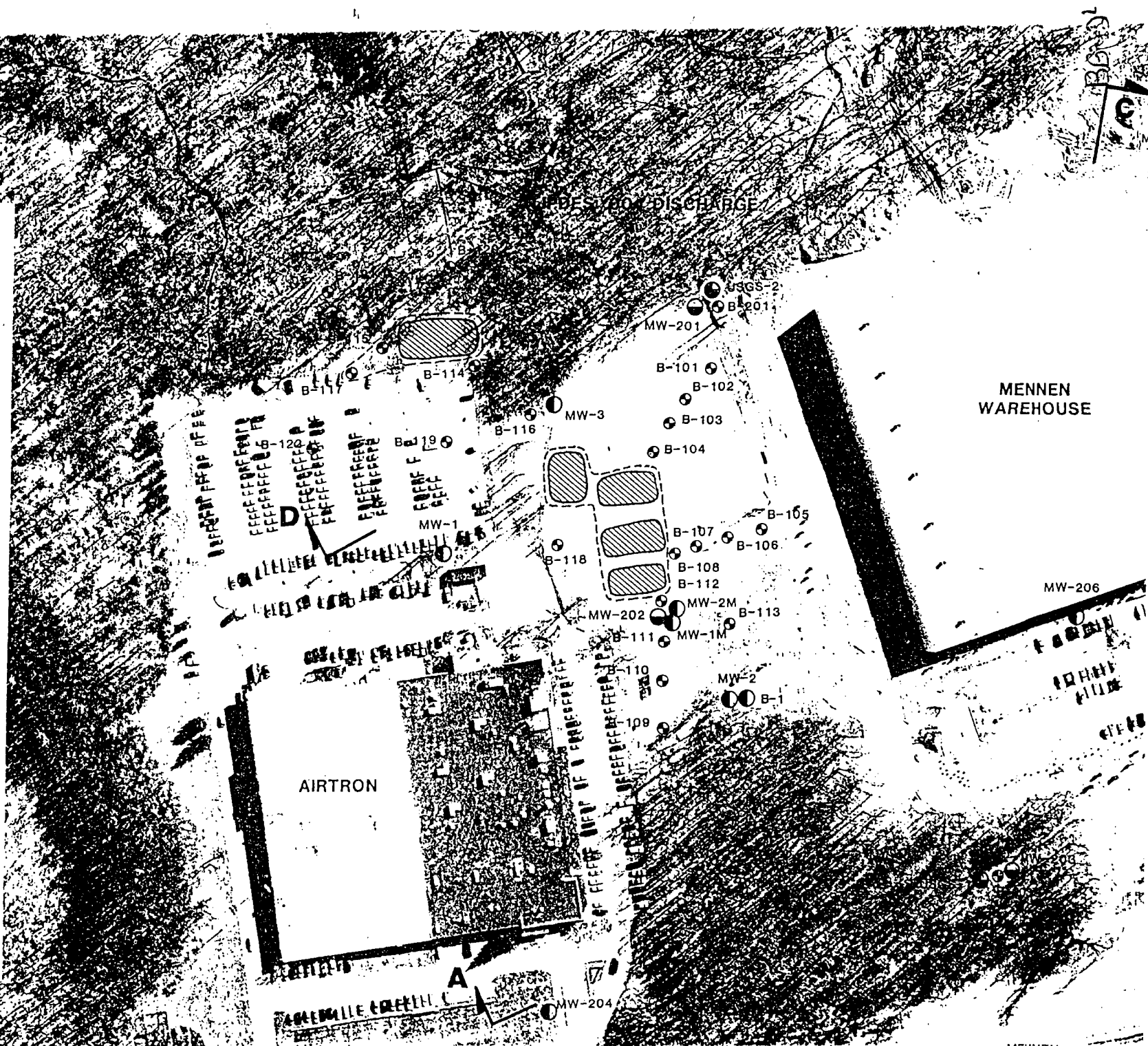
```
=====
SAMPLE NUMBER                MW-1
SAMPLE DATE:                 10/1/87
=====
PARAMETER:
=====
BIS(2-ETHYLYHEXYL) PHTHALATE    6 JB
DI-N-OCTYL PHTHALATE           35 B

TOTAL BASE NEUTRALS            41

LIBRARY SEARCH                 170
=====
```

YSIS SUMMARY

TOTAL VOLATILE ORGANIC COMPOUNDS (ug/kg)	TOTAL BASE NEUTRAL COMPOUNDS* (ug/kg)
0	
64	1290
100	
21	7280
8	
20	
10	
61	
0	
5	
6	
29	
34	
0	
44	
12	
10	
63	
5	
17	
7	
17	
58	
48	
243	
211	
44	
61	
21,707	
61	
50	
55	
48	
194	
31	
34	
64	
23	
14	
79	
21	
252	



RESULTS OF
SAMPLING AND ANALYSIS PROGRAM
QUARTERLY GROUNDWATER MONITORING
SAMPLING DATE: APRIL 26, 1988
LITTON INDUSTRIES
AIRTRON DIVISION
HANOVER TOWNSHIP, NEW JERSEY

By
CONVERSE ENVIRONMENTAL EAST

June 30, 1988,

Project No. 87-47400-01

TABLE 1
 BASE/NEUTRAL AND ACID EXTRACTABLE COMPOUNDS
 AIRTRON - LITTON CORPORATION
 87-47400-01
 ALL RESULTS IN UG/L

PARAMETER	MW-1
BASE/NEUTRAL COMPOUNDS	
BIS (2-ETHYL HEXYL) PHTHALATE	2 B
ACID EXTRACTABLE COMPOUNDS	N.D.
LIBRARY SEARCH (BN/AE)	83

B - ANALYTE FOUND IN LAB BLANK

N.D. - NOT DETECTED

TABLE 2
VOLATILE ORGANIC COMPOUNDS
AIRTRON - LITTON CORPORATION
87-47400-01
ALL RESULTS IN UG/L

COMPOUND	MW-201	MW-201 A	MW-201 *	MW-202	MW-202 B	MW-202 *	MW-203	MW-203 C
BENZENE	2	N.D.	N.D.	N.D.	1	N.D.	N.D.	N.D.
BROMODICHLOROMETHANE	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
BROMOFORM	1 B	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
BROMOMETHANE	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
CARBON TETRACHLORIDE	2	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
CHLOROMETHANE	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
DIBROMOCHLOROMETHANE	1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
1,1-DICHLOROETHENE	2	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
1,1-DICHLOROETHANE	1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
1,2-DICHLOROETHENE	4	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
cis-1,3-DICHLOROPROPENE	2	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
ETHYLBENZENE	2 B	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
METHYLENE CHLORIDE	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	1 B	1
TETRACHLOROETHYLENE	2	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
TRICHLOROETHYLENE	2	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
TRICHLOROFLUOROMETHANE	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
1,1,1-TRICHLOROETHANE	2	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
TOLUENE	2 B	N.D.	N.D.	0.8 B	1	N.D.	1 B	1
LIBRARY SEARCH	10	N.D.	N.D.	N.D.	N.D.	N.D.	11	6
TOTAL	25	0	0	0.8	2	0	2	2

N.D. - NOT DETECTED

A - O = HIDDEN DUPLICATES, ANALYSIS PERFORMED BY YORK LABORATORIES
* = DUPLICATES, ANALYSIS PERFORMED BY ICM LABORATORIES

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TABLE 2
VOLATILE ORGANIC COMPOUNDS
AIRTRON - LITTON CORPORATION
87-47400-01
ALL RESULTS IN UG/L

COMPOUND	MW-203 *	MW-204	MW-204 D	MW-204 *	MW-205	MW-205 E	MW-206	MW-206 F
BENZENE	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	26	N.D.
BROMODICHLOROMETHANE	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	19	N.D.
BROMOFORM	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	16 B	N.D.
BROMOMETHANE	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
CARBON TETRACHLORIDE	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	25	N.D.
CHLOROMETHANE	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
DIBROMOCHLOROMETHANE	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
1,1-DICHLOROETHENE	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
1,1-DICHLOROETHANE	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
1,2-DICHLOROETHENE	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	780	400
cis-1,3-DICHLOROPROPENE	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
ETHYLBENZENE	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	29 B	N.D.
METHYLENE CHLORIDE	N.D.	12 B	2	7	2 B	N.D.	44 B	73 B
TETRACHLOROETHYLENE	N.D.	N.D.	2	N.D.	N.D.	N.D.	2100	2100
TRICHLOROETHYLENE	N.D.	N.D.	N.D.	N.D.	45	42	3200	3000
TRICHLOROFLUOROMETHANE	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
1,1,1-TRICHLOROETHANE	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	32	N.D.
TOLUENE	N.D.	2 B	2	N.D.	0.7	N.D.	37 B	N.D.
LIBRARY SEARCH	N.D.	5	23	5	N.D.	N.D.	N.D.	N.D.
TOTAL	0	14	6	7	47.7	42	6308	5573

N.D. - NOT DETECTED

A - O = HIDDEN DUPLICATES, ANALYSIS PERFORMED BY YORK LABORATORIES
* = DUPLICATES, ANALYSIS PERFORMED BY ICM LABORATORIES

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TABLE 2
VOLATILE ORGANIC COMPOUNDS
AIRTRON - LITTON CORPORATION
87-47400-01
ALL RESULTS IN UG/L

COMPOUND	MW-1	MW-1 G	MW-2	MW-2 H	MW-3	MW-3 I	MW-2M	MW-2M J
BENZENE	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
BROMODICHLOROMETHANE	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
BROMOFORM	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
BROMOMETHANE	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
CARBON TETRACHLORIDE	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
CHLOROMETHANE	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
DIBROMOCHLOROMETHANE	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
1,1-DICHLOROETHENE	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
1,1-DICHLOROETHANE	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
1,2-DICHLOROETHENE	N.D.	N.D.	220	190	340	360	170	N.D.
cis-1,3-DICHLOROPROPENE	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
ETHYLBENZENE	N.D.	N.D.	41	N.D.	N.D.	N.D.	N.D.	N.D.
METHYLENE CHLORIDE	2 B	N.D.	160 B	280 B	170 B	280 B	27 B	150 B
TETRACHLOROETHYLENE	N.D.	N.D.	3200	3000	2100	2200	420	380
TRICHLOROETHYLENE	N.D.	N.D.	7100	7800	3200	3300	1800	1500
TRICHLOROFLUOROMETHANE	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
1,1,1-TRICHLOROETHANE	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
TOLUENE	0.9	N.D.	75	100	74	110	20 B	N.D.
LIBRARY SEARCH	N.D.	16	N.D.	1740	N.D.	590	N.D.	N.D.
TOTAL	2.9	0	10796	11370	5884	6250	2437	2030

N.D. - NOT DETECTED

A - O = HIDDEN DUPLICATES, ANALYSIS PERFORMED BY YORK LABORATORIES

* = DUPLICATES, ANALYSIS PERFORMED BY ICM LABORATORIES

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TABLE 2
VOLATILE ORGANIC COMPOUNDS
AIRTRON - LITTON CORPORATION
87-47400-01
ALL RESULTS IN UG/L

COMPOUND	USGS-1	USGS-1 K	USGS-2	USGS-2 L	USGS-3	USGS-3 M	MENN-10	MENN-10 N
BENZENE	N.D.	N.D.	0.8	N.D.	1	N.D.	N.D.	N.D.
BROMODICHLOROMETHANE	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
BROMOFORM	N.D.	N.D.	N.D.	N.D.	1 B	N.D.	13 B	N.D.
BROMOMETHANE	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
CARBON TETRACHLORIDE	N.D.	N.D.	N.D.	N.D.	1	N.D.	N.D.	N.D.
CHLOROMETHANE	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
DIBROMOCHLOROMETHANE	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
1,1-DICHLOROETHENE	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
1,1-DICHLOROETHANE	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
1,2-DICHLOROETHENE	480	420	35	48	N.D.	N.D.	230	200
cis-1,3-DICHLOROPROPENE	N.D.	N.D.	N.D.	N.D.	2	N.D.	N.D.	N.D.
ETHYLBENZENE	N.D.	N.D.	1 B	N.D.	2 B	N.D.	N.D.	N.D.
METHYLENE CHLORIDE	N.D.	66	0.9 B	N.D.	1 B	1	19 B	6 B
TETRACHLOROETHYLENE	4000	3500	62	160	2	N.D.	420	340
TRICHLOROETHYLENE	9500	7900	55	280	2	N.D.	1500	1200
TRICHLOROFLUOROMETHANE	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
1,1,1-TRICHLOROETHANE	N.D.	N.D.	N.D.	N.D.	1	N.D.	N.D.	N.D.
TOLUENE	N.D.	31	1 B	N.D.	2 B	2	N.D.	N.D.
LIBRARY SEARCH	N.D.	N.D.	N.D.	N.D.	N.D.	120	N.D.	N.D.
TOTAL	13980	11917	155.7	488	15	3	2182	1746

N.D. - NOT DETECTED

A - O = HIDDEN DUPLICATES, ANALYSIS PERFORMED BY YORK LABORATORIES

* = DUPLICATES, ANALYSIS PERFORMED BY ICM LABORATORIES

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TABLE 2
VOLATILE ORGANIC COMPOUNDS
AIRTRON - LITTON CORPORATION
87-47400-01
ALL RESULTS IN UG/L

COMPOUND	MENN-P-1	MENN-P-1 O
BENZENE	19	N.D.
BROMODICHLOROMETHANE	15	N.D.
BROMOFORM	13 B	N.D.
BROMOMETHANE	N.D.	N.D.
CARBON TETRACHLORIDE	19	N.D.
CHLOROMETHANE	N.D.	N.D.
DIBROMOCHLOROMETHANE	N.D.	N.D.
1,1-DICHLOROETHENE	N.D.	N.D.
1,1-DICHLOROETHANE	14	N.D.
1,2-DICHLOROETHENE	99	35
cis-1,3-DICHLOROPROPENE	16	N.D.
ETHYLBENZENE	21 B	N.D.
METHYLENE CHLORIDE	18 B	N.D.
TETRACHLOROETHYLENE	280	220
TRICHLOROETHYLENE	1500	590
TRICHLOROFLUOROMETHANE	N.D.	9
1,1,1-TRICHLOROETHANE	29	4
TOLUENE	27 B	N.D.
LIBRARY SEARCH	123	7
TOTAL	2070	858

N.D. - NOT DETECTED

A - O = HIDDEN DUPLICATES, ANALYSIS PERFORMED BY YORK LABORATORIES
* = DUPLICATES, ANALYSIS PERFORMED BY ICM LABORATORIES

CC-7

ADDENDUM 1
ANALYTICAL TEST RESULTS
GROUNDWATER QUARTERLY SAMPLING
COLLECTED APRIL 14, 1989
ROUND 8

AIRTRON DIVISION
LITTON INDUSTRIES, INC.
HANOVER, NEW JERSEY

By
CONVERSE ENVIRONMENTAL EAST

May 17, 1989

Project No. 87-47400-01

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ANALYTICAL RESULTS FOR QUARTERLY GROUNDWATER SAMPLING ROUND 8

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USGS-2	5
USGS-3	4
MEN.MW-10	6
MEN.P-1	5
[rbe0225]	



REPORT TRANSMITTAL

REPORT NUMBER 20890-662

DATE MAY 1, 1989

ATTENTION MR. ROBERT ZELLEY

CLIENT PROJECT CONVERSE ENVIRONMENTAL EAST - AIRTRON

The above referenced report is enclosed. Copies of this report and supporting data will be retained in our files in the event they are required for future reference.

If there are any questions concerning this report, please do not hesitate to contact us.

Very Truly Yours,

KYLE E. DOLBOW Ph.D.
President

628 ROUTE 10 • WHIPPANY NEW JERSEY 07981 • (201) 428 8181

200 MONROE TURNPIKE • MONROE, CONNECTICUT 05469 • (203) 281-4850
125 WEST CENTER COURT • SCHALMERS, ILLINOIS 60195 • (312) 705-0740

PP-3

000001

May 1, 1989

#20890-662
CONVERSE ENVIRONMENTAL EAST
91 ROSELAND AVENUE
P.O. BOX 291
CALDWELL, NJ 07006


ATTENTION: MR. ROBERT ZELLEY

PURPOSE AND RESULTS

Fourteen (14) samples including a trip blank were received on April 14, 1989 for analysis by York Laboratories of New Jersey, Inc. These samples were analyzed for Priority Pollutant Volatile Organics +15 by USEPA CLP Methodology within the recommended holding time.

Results are in the following tables, with chain-of-custody and support documentation included as an Appendix.

DATA RELEASE AUTHORIZED BY:



Kyle E. Dolbow, Ph.D.
President

The liability of York Laboratories of New Jersey, Inc. is limited to the actual dollar value of this project.

000003

CLIENT Converse
 JOB NO. 20890-662

WATER

EPA PRIORITY POLLUTANT
 VOLATILE COMPOUNDS
 ug/L

Dilution Factor (DF)	1.00	1.00	1.00	1.00	1.00	1.00	Lower Limits of Detection (LLD) with no Dilution*
Method Blank I.D.	>F7291	>F7291	>F7291	>F9271	>F7291	>F7291	
Client I.D.	METHOD BLANK	TB	MW-204	MW-205	MW-206	MW-2M	
Compound	QC-0371V2	662001	662002	662003	622004	622005	
Lab I.D.							
Chloromethane	U	U	U	U	U	U	10
Bromomethane	U	U	U	U	U	U	10
Vinyl Chloride	U	U	U	U	U	U	10
Chloroethane	U	U	U	U	U	U	10
Methylene Chloride	U	3J	4J	U	U	3J	5
1,1-Dichloroethene	U	U	U	U	U	U	5
1,1-Dichloroethane	U	U	U	U	2J	U	5
trans-1,2-Dichloroethene	U	U	U	U	U	U	5
Chloroform	U	U	U	U	U	5	5
1,2-Dichloroethane	U	U	U	U	U	U	5
1,1, 1-Trichloroethane	U	U	U	U	10	U	5
Carbon Tetrachloride	U	U	U	U	U	U	5
Bromodichloromethane	U	U	U	U	U	U	5
2-Chloroethylvinyl ether	U	U	U	U	U	U	5
1,2-Dichloropropane	U	U	U	U	U	U	5
trans-1,3-dichloropropene	U	U	U	U	U	U	5
Trichloroethylene	U	U	U	50	DL	310	5
Benzene	U	U	U	U	U	U	5
cis-1,3-Dichloropropene	U	U	U	U	U	U	5
Dibromochloromethane	U	U	U	U	U	U	5
1,1,2-Trichloroethane	U	U	U	U	U	U	5
Bromoform	U	U	U	U	U	U	5
Tetrachloroethylene	U	U	U	U	DL	92	5
1,1,2,2-Tetrachloroethane	U	U	U	U	U	U	5
Toluene	U	U	U	U	U	U	5
Chlorobenzene	U	U	U	U	U	U	5
Ethyl Benzene	U	U	U	U	U	U	5
Acrolein	U	U	U	U	U	U	50
Acrylonitrile	U	U	U	U	U	U	50
m-Dichlorobenzene	U	U	U	U	U	U	5
o-Dichlorobenzene	U	U	U	U	U	U	5
p-Dichlorobenzene	U	U	U	U	U	U	5

*MDL (Minimum Detection Limit) = LLD X DF

DL - See Dilution Run

DD-5

000004

CLIENT Converse
 JOB NO. 20890-662

WATER

EPA PRIORITY POLLUTANT
 VOLATILE COMPOUNDS
 ug/L

Dilution Factor (DF)	1.00	1.00	1.00	1.00	1.00	1.00	Lower Limits of Detection (LLD) with no Dilution*
Method Blank I.D.	>F7291	>F7291	>F7291	>F7291	>F7305	>F7305	
Client I.D.	MW-1	MW-2	MW-3	USGS-1	METHOD BLANK	USGS-3	
Compound	Lab I.D.				QC-0371V3		
	662006	662007	662008	662009		662010	
Chloromethane	U	U	U	U	U	U	10
Bromomethane	U	U	U	U	U	U	10
Vinyl Chloride	U	U	U	6J	U	U	10
Chloroethane	U	U	U	U	U	U	10
Methylene Chloride	6	4J	5	4J	U	1J	5
1,1-Dichloroethene	U	3J	U	3J	U	U	5
1,1-Dichloroethane	U	U	U	1J	U	U	5
trans-1,2-Dichloroethene	U	2J	U	3J	U	U	5
Chloroform	U	U	U	7	U	U	5
1,2-Dichloroethane	U	U	U	U	U	U	5
1,1, 1-Trichloroethane	U	6	7	18	U	U	5
Carbon Tetrachloride	U	U	U	U	U	U	5
Bromodichloromethane	U	U	U	U	U	U	5
2-Chloroethylvinyl ether	U	U	U	U	U	U	5
1,2-Dichloropropane	U	U	U	U	U	U	5
trans-1,3-dichloropropene	U	U	U	U	U	U	5
Trichloroethylene	U	DL	DL	DL	U	U	5
Benzene	U	U	U	4J	U	U	5
cis-1,3-Dichloropropene	U	U	U	U	U	U	5
Dibromochloromethane	U	U	U	U	U	U	5
1,1,2-Trichloroethane	U	U	U	U	U	U	5
Bromoform	U	U	U	U	U	U	5
Tetrachloroethylene	U	DL	DL	DL	U	U	5
1,1,2,2-Tetrachloroethane	U	U	U	U	U	U	5
Toluene	1J	1J	1J	1J	U	U	5
Chlorobenzene	U	U	U	U	U	U	5
Ethyl Benzene	3J	U	U	U	U	U	5
Acrolein	U	U	U	U	U	U	50
Acrylonitrile	U	U	U	U	U	U	50
m-Dichlorobenzene	U	U	U	U	U	U	5
o-Dichlorobenzene	U	U	U	U	U	U	5
p-Dichlorobenzene	U	U	U	U	U	U	5

*MDL (Minimum Detection Limit) = LLD X DF
 DL - See Dilution Run

DD-6

000005

CLIENT Converse
 JOB NO. 20890-662

WATER

EPA PRIORITY POLLUTANT
 VOLATILE COMPOUNDS
 ug/L

Dilution Factor (DF)	1.00	1.00	1.00	1.00	1.00	50.0	Lower Limits of Detection (LLD) with no Dilution*
Method Blank I.D.	>F7305	>F7305	>F7305	>F7305	>F7322	>F7322	
Client I.D.	MEN MW-10	MEN MW-20	USGS-2	MEN P-1	METHOD BLANK	MEN P-1	
Compound	Lab I.D.	662011	662012	662013	662014	QC-0371V4	662014 DL
Chloromethane	U	U	U	U	U	NA	10
Bromomethane	U	U	U	U	U	NA	10
Vinyl Chloride	U	U	U	U	U	NA	10
Chloroethane	U	U	U	U	U	NA	10
Methylene Chloride	U	U	4J	4J	2J	NA	5
1,1-Dichloroethene	U	U	U	U	U	NA	5
1,1-Dichloroethane	1J	1J	U	U	U	NA	5
trans-1,2-Dichloroethene	U	U	U	U	U	NA	5
Chloroform	U	U	U	U	U	NA	5
1,2-Dichloroethane	U	U	U	U	U	NA	5
1,1, 1-Trichloroethane	8	7	U	1J	U	NA	5
Carbon Tetrachloride	U	U	U	U	U	NA	5
Bromodichloromethane	U	U	U	U	U	NA	5
2-Chloroethylvinyl ether	U	U	U	U	U	NA	5
1,2-Dichloropropane	U	U	U	U	U	NA	5
trans-1,3-dichloropropene	U	U	U	U	U	NA	5
Trichloroethylene	DL	DL	36	DL	U	1600	5
Benzene	U	U	U	U	U	NA	5
cis-1,3-Dichloropropene	U	U	U	U	U	NA	5
Dibromochloromethane	U	U	U	U	U	NA	5
1,1,2-Trichloroethane	U	U	U	U	U	NA	5
Bromoform	U	U	U	U	U	NA	5
Tetrachloroethylene	DL	DL	26	110	U	NA	5
1,1,2,2-Tetrachloroethane	U	U	U	U	U	NA	5
Toluene	U	U	U	U	U	NA	5
Chlorobenzene	U	U	U	U	U	NA	5
Ethyl Benzene	U	U	U	U	U	NA	5
Acrolein	U	U	U	U	U	NA	50
Acrylonitrile	U	U	U	U	U	NA	50
m-Dichlorobenzene	U	U	U	U	U	NA	5
o-Dichlorobenzene	U	U	U	U	U	NA	5
p-Dichlorobenzene	U	U	U	U	U	NA	5

*MDL (Minimum Detection Limit) = LLD X DF

NA - Not Applicable

DL - See Dilution Run

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CLIENT Converse
 JOB NO. 20890-662

WATER

EPA PRIORITY POLLUTANT
 VOLATILE COMPOUNDS
 ug/L

Dilution Factor (DF)	100.0	100.0	200.0	200.0	200.0	200.0	Lower Limits of Detection (LLD) with no Dilution*
Method Blank I.D.	>F7322	>F7322	>F7322	>F7322	>F7322	>F7322	
Client I.D.	MEN MW-10	MEN MW-206	MW-2	MW-3	USGS-1	MEN MW-20	
Compound	662011 DL	662004 DL	662007 DL	662008 DL	662009 DL	662012 DL	
Chloromethane	NA	NA	NA	NA	NA	NA	10
Bromomethane	NA	NA	NA	NA	NA	NA	10
Vinyl Chloride	NA	NA	NA	NA	NA	NA	10
Chloroethane	NA	NA	NA	NA	NA	NA	10
Methylene Chloride	NA	NA	NA	NA	NA	NA	5
1,1-Dichloroethene	NA	NA	NA	NA	NA	NA	5
1,1-Dichloroethane	NA	NA	NA	NA	NA	NA	5
trans-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	5
Chloroform	NA	NA	NA	NA	NA	NA	5
1,2-Dichloroethane	NA	NA	NA	NA	NA	NA	5
1,1,1-Trichloroethane	NA	NA	NA	NA	NA	NA	5
Carbon Tetrachloride	NA	NA	NA	NA	NA	NA	5
Bromodichloromethane	NA	NA	NA	NA	NA	NA	5
2-Chloroethylvinyl ether	NA	NA	NA	NA	NA	NA	5
1,2-Dichloropropane	NA	NA	NA	NA	NA	NA	5
trans-1,3-dichloropropene	NA	NA	NA	NA	NA	NA	5
Trichloroethylene	5400	2400	6700	2700	6200	1500	5
Benzene	NA	NA	NA	NA	NA	NA	5
cis-1,3-Dichloropropene	NA	NA	NA	NA	NA	NA	5
Dibromochloromethane	NA	NA	NA	NA	NA	NA	5
1,1,2-Trichloroethane	NA	NA	NA	NA	NA	NA	5
Bromoform	NA	NA	NA	NA	NA	NA	5
Tetrachloroethylene	3200	1600	2900	1500	3100	510J	5
1,1,2,2-Tetrachloroethane	NA	NA	NA	NA	NA	NA	5
Toluene	NA	NA	NA	NA	NA	NA	5
Chlorobenzene	NA	NA	NA	NA	NA	NA	5
Ethyl Benzene	NA	NA	NA	NA	NA	NA	5
Acrolein	NA	NA	NA	NA	NA	NA	50
Acrylonitrile	NA	NA	NA	NA	NA	NA	50
m-Dichlorobenzene	NA	NA	NA	NA	NA	NA	5
o-Dichlorobenzene	NA	NA	NA	NA	NA	NA	5
p-Dichlorobenzene	NA	NA	NA	NA	NA	NA	5

*MDL (Minimum Detection Limit) = LLD X DF
 NA - Not Applicable

DD-3

**RESULTS OF
SAMPLING AND ANALYSIS PROGRAM
QUARTERLY GROUNDWATER MONITORING
SAMPLING DATE: AUGUST 29, 1989
ROUND 9**

**AIRTRON DIVISION
LITTON INDUSTRIES
HANOVER TOWNSHIP, NEW JERSEY**

**By
CONVERSE ENVIRONMENTAL EAST**

November 3, 1989

Project No. 87-47400-01

TABLE 1

CHEMICAL TEST RESULTS FOR
VOLATILE ORGANICS IN
WATER SAMPLES

ALL RESULTS IN ug/l

SAMPLE NUMBER	MW-1	MW-2	MW-2M	MW-3	MW-204	MW-205	MW-206	USGS-1	USGS-2	USGS-3	USGS-00*	MEN.MW-10	1
SAMPLE DATE:	8/29/89	8/29/89	8/29/89	8/29/89	8/29/89	8/29/89	8/29/89	8/29/89	8/29/89	8/29/89	8/29/89	8/29/89	8/29/89
PARAMETER:													
METHYLENE CHLORIDE	ND	ND	3 J	3 J	ND	ND	130	ND	ND	ND	5 B	ND	
1,1-DICHLOROETHENE	ND	4 J	ND	ND	ND	ND	ND	2 J	ND	ND	ND	ND	
1,1-DICHLOROETHANE	ND	ND	ND	ND	ND	ND	ND	1 J	ND	ND	ND	ND	ND
TRICHLOROETHYLENE	ND	7600 D	1100 D	3600 D	ND	38	2400	13000 D	44	ND	ND	1400	860 D
CHLOROFORM	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-TRICHLOROETHANE	ND	6	2 J	6	ND	1 J	ND	16	ND	ND	ND	ND	2 J
TETRACHLOROETHYLENE	ND	2400 D	150	1500 D	ND	ND	1800	8200 D	32	ND	ND	660	170
TRICHLOROFLUOROMETHANE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRANS-1,2-DICHLOROETHENE	ND	3 J	ND	ND	ND	ND	ND	1300 D	ND	ND	ND	ND	ND
TOLUENE	6	8	2 J	7	2 J	5 J	ND	13	1 J	1 J	ND	180	78
BENZENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	29 J	ND
CHLOROETHANE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BROMOMETHANE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-TETRACHLOROETHANE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
VINYL CHLORIDE	ND	ND	ND	ND	ND	ND	ND	18	ND	ND	ND	ND	ND
ETHYL BENZENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TOTAL P.P. VOLATILES	6	10021	1257	5116	2	44	4330	22550	77	1	5	2269	1119
LIBRARY SEARCH	ND	410	68	290	8	ND	440	325	38	ND	ND	570	51

ND - Not detected

J - Indicates that the compound was analyzed for and determined to be present in the sample. The concentration listed is an estimate which is less than the specified minimum detection limit but is greater than zero.

B - This flag is used when the analyte is found in the blanks as well as the sample. It indicates possible sample contamination and warns the data user to use caution when applying the results of this analyte

D - Sample was diluted.

* - Indicates a hidden duplicate of USGS-3

C-33

TABLE 1

CHEMICAL TEST RESULTS FOR
VOLATILE ORGANICS IN
WATER SAMPLES

ALL RESULTS IN ug/l

```
=====
SAMPLE NUMBER          TRIP
SAMPLE DATE:          8/29/89
=====
PARAMETER:
=====
METHYLENE CHLORIDE      2 J
1,1-DICHLOROETHENE      ND
1,1-DICHLOROETHANE      ND
TRICHLOROETHYLENE       ND
CHLOROFORM              ND
1,1,1-TRICHLOROETHANE   ND
TETRACHLOROETHYLENE     2 J
TRICHLOROFLUOROMETHANE  ND
TRANS-1,2-DICHLOROETHENE ND
TOLUENE                 9
BENZENE                 ND
CHLOROETHANE            ND
BROMOMETHANE            ND
1,1,2,2-TETRACHLOROETHANE ND
VINYL CHLORIDE          ND
ETHYL BENZENE           ND

TOTAL P.P. VOLATILES    13

LIBRARY SEARCH          ND
=====
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State of New Jersey
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
TRENTON, NEW JERSEY 08625

DEC 14 1979

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Corporation Trust Company
Registered Agent for
Litton Systems, Incorporated
28 West State Street
Trenton, New Jersey 08608

Re: Litton Systems, Incorporated
Airtron Division
Morris Plains, New Jersey
NJ 0025739

Gentlemen:

There is enclosed for service upon you an Administrative Order issued by this Department pursuant to the provisions of N.J.S.A. 58:10A-10(b).

If you have any questions concerning this ORDER please feel free to contact Mr. Peter T. Lynch, Manager, Passaic-Hackensack Basin, Monitoring, Surveillance and Enforcement Element at the above address or by telephoning (201) 648-2200.

Very truly yours,

ORIGINAL SIGNED BY
ARNOLD SCHIFFMAN, DIRECTOR
Arnold Schiffman
DIVISION OF WATER RESOURCES
Director

cc: Richard A. Baker, U.S.E.P.A.
Mayor and Council Borough of Morris Plains
Leon Pieta, Production Manager, Airtron Division

FF-1



State of New Jersey
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
TRENTON, NEW JERSEY 08625

IN THE MATTER OF:
LITTON SYSTEMS INCORPORATED
AIRTRON DIVISION

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
: ADMINISTRATIVE ORDER :
: :
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

The following FINDINGS are made and ORDER issued pursuant to the authority vested in the Commissioner of the New Jersey Department of Environmental Protection (hereinafter NJDEP) and duly delegated to the Director of the Division of Water Resources by N.J.S.A. 13:1D-1 et seq; N.J.S.A. 13:1B-5 and the New Jersey Water Pollution Control Act, N.J.S.A. 58:10A-1 et seq. (hereinafter "The Act").

FINDINGS OF FACT

1. On April 9, 1963, the New Jersey Department of Health (hereinafter "NJDOH") issued permit No. S-2-63-1820 to Litton Industries, Airtron Division (hereinafter "Litton-Airtron") to construct and operate an industrial waste treatment plant in the Township of Hanover, New Jersey.
2. The industrial waste treatment plant was designed to treat and neutralize acid-alkali waste and cyanide and chromium wastes as more particularly detailed in the plans specifications and engineering report submitted by Litton-Airtron to NJDOH. The design included two sludge drying beds to provide capacity for the storage and drying of nontoxic, inert metallic oxides and sludge resulting from the waste treatment operations. The design also specified that liquid in the sludge beds would be dissipated by evaporation and percolation and that dried sludge would be disposed of in an area acceptable to NJDOH. Means were to be provided whereby excess liquid in the sludge beds could be returned to the inlet of the rinse water settling tank.
3. Pursuant to N.J.S.A. 13:1D-1 et seq. the powers of NJDOH relating to this permit have been transferred to and vested in the Commissioner of NJDEP.
4. On February 13, 1979, NJDEP conducted an on site industrial inspection at the Litton-Airtron facility in Morris Plains, New Jersey. The portion of the inspection dealing with the sludge drying beds revealed that the construction, installation and operation of the

sludge drying beds differed in several aspects from the conditions found in permit No. S-2-63-1820. These differences are:

- a. The design called for two beds but the inspection revealed the existence of four drying beds. By the definition of "Treatment Works" in N.J.A.C. 7:14-1 et seq. the two additional sludge drying beds are industrial wastewater treatment systems and as such constitute installations which require a Treatment Works Approval.
 - b. By the terms of permit No. S-2-63-1820, the liquid associated with the sludge should dissipate by evaporation and percolation and the resulting dried sludge should be disposed of in an area acceptable to NJDEP. The inspection, however, revealed that the liquid has never dissipated sufficiently to allow the sludge to dry and that the sludge has never been removed from the beds.
 - c. The materials discharged to the sludge beds are not in accordance with the terms of permit No. S-2-63-1820. The beds were designed to receive the sludges produced in three closed loop treatment systems for the contents of the cyanide, chromium and copper/chromium rinse tanks in the plating operation. The beds were also designed to receive the entire contents (liquid and sludge) of two batch treatment tanks which treat collected floor spillage. The inspection revealed that in addition to floor spillage the contents of every tank within the plating room is treated in either of the floor spillage batch treatment tanks and discharged to the sludge beds.
5. The operation of the sludge drying beds in a manner inconsistent with the terms of permit No. S-2-63-1890, constitutes a violation of The Act and of N.J.A.C. 7:14-2.6.

ORDER

NOW THEREFORE IT IS ORDERED THAT;

6. Litton-Airtron shall discontinue the use of the four sludge beds within thirty (30) days from receipt of this ORDER.

7. Litton-Airtron shall remove and dispose of all waste materials from the sludge beds in a manner acceptable to the NJDEP within thirty (30) days from receipt of this ORDER.

8. Litton-Airtron shall obtain a modification from NJDEP of permit No. S-2-63-1820 for the sludge beds in accordance with N.J.A.C. 7:14-1 et seq. if Litton-Airtron desires to resume their use.

9. Litton-Airtron shall install wells to monitor the groundwater quality in the area of the subject sludge beds. A representative of the Division's Ground Water Management Unit will specify the number, design and location of these wells.

10. Litton-Airtron shall submit a written report, within thirty (30) days from receipt of this ORDER, detailing the corrective actions taken and the alternate method of sludge handling and disposal.

11. Any submission of information required by this ORDER shall be made to:

Mr. Peter T. Lynch, Manager
Passaic-Hackensack Basin
Division of Water Resources
Monitoring, Surveillance
and Enforcement Element
1100 Raymond Boulevard, Room 510
Newark, New Jersey 07102

12. NOTICE IS HEREBY GIVEN that pursuant to N.J.S.A. 52:14-B-1 et seq. and N.J.S.A. 58:10A-10(b) Litton-Airtron is entitled to a hearing before NJDEP. Any hearing request must be delivered to the address below within twenty (20) business days from receipt of this ORDER. The request should be mailed to:

Office of Regulatory Affairs
Division of Water Resources
P. O. Box CN-029
Trenton, New Jersey 08625

13. NOTICE IS FURTHER GIVEN that pursuant to N.J.S.A. 52:14B-1(b)(4) and N.J.A.C. 15:15-10.2(b)(4), the applicant shall furnish NJDEP with a definite and detailed statement of the matters it will assert in the requested hearing. Specifically, it is requested that:

- (a) Litton-Airtron specify which if any of the FINDINGS OF FACT set forth are denied; and
- (b) Litton-Airtron specify its own version of the FINDINGS OF FACT; and
- (c) Litton-Airtron specify that portion of the ORDER, paragraphs 6 through 10, which aggrieves Litton-Airtron.

If there are no FINDINGS OF FACT in dispute, NJDEP may deny the request for a hearing. Any matters not contested shall be considered in full force and effect.

14. NOTICE IS FURTHER GIVEN that if no request for a hearing is received within twenty (20) business days, this ORDER shall become final.

15. NOTICE IS FURTHER GIVEN that pursuant to N.J.S.A. 58:10A-10(e) any person who violates this ORDER shall be subject to civil penalties of up to \$10,000 per day for each day of violation.

16. NOTICE IS FURTHER GIVEN that pursuant to N.J.S.A. 58:10A-10(f) willful or negligent violation of the Act is a misdemeanor punishable, upon conviction, by criminal penalties of up to \$25,000 per day of violation.

This ORDER shall be effective upon receipt,

DEC 12 1978

DATE: _____

ORIGINAL SIGNED BY
ARNOLD SCHIFFMAN, DIRECTOR
DIVISION OF WATER RESOURCES

Arnold Schiffman
Director

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF HAZARDOUS WASTE MANAGEMENT

~~5th FL, 401 E. State St., Trenton, N.J. 08625~~

1259 RT 46 PARSIPPANY 07054

NOTICE OF VIOLATION

Pg 1 of 2

ID NO. NSD 030 239412 DATE 9/23/87
NAME OF FACILITY AIRTRON INC.
LOCATION OF FACILITY 200 E. HANOVER AVE., HANOVER 07950
NAME OF OPERATOR ROBERT CHAPMAN

You are hereby NOTIFIED that during my inspection of your facility on the above date, the following violation(s) of the Solid Waste Management Act, (N.J.S.A. 13:1E-1 et seq.) and Regulations (N.J.A.C. 7:26-1 et seq.) promulgated thereunder and/or the Spill Compensation and Control Act, (N.J.S.A. 58:10-23.11 et seq.) and Regulations (N.J.A.C. 7:1E-1 et seq.) promulgated thereunder were observed. These violation(s) have been recorded as part of the permanent enforcement history of your facility.

DESCRIPTION OF VIOLATION NSAC 7:26 - 7.4(h)1 + 2 FAILURE
TO RECEIVE COPIES OF PT B of MANIFEST #'S
NYA 5565537; NJ 0218088 7:26-9.4(d)4 IV
WASTE NOT SEGREGATED BY WASTE TYPE.
7:26-9.4(d)4V CONTAINERS NOT ARRANGED SO THAT
LABELS ARE VISIBLE. 7:26-9.4(g)5 NO ANNUAL
REVIEW OF TRAINING

Remedial action to correct these violations must be initiated immediately and be completed by

10/23/87. Within fifteen (15) days of receipt of this Notice of Violation, you shall submit in writing, to the investigator issuing this notice at the above address, the corrective measures you have taken to attain compliance. The issuance of this document serves as notice to you that a violation has occurred and does not preclude the State of New Jersey, or any of its agencies from initiating further administrative or legal action, or from assessing penalties, with respect to this or other violations. Violations of these regulations are punishable by penalties of \$25,000 per violation.

MATTHEW BIGLEY

Matthew Bigley

Investigator, Division of Waste Management
Department of Environmental Protection

(201) 299-7570

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Di



Jorge H. Berkowitz, Ph.D.
Director

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF ENVIRONMENTAL QUALITY
CN 027, TRENTON, NJ 08625

Let's protect our earth



Anthony J. McMahon, Assistant Director
Environmental Enforcement

IN THE MATTER OF : ADMINISTRATIVE ORDER AND
AIRTRON :
DIV. OF LITTON INDUSTRIES : NOTICE OF CIVIL ADMINISTRATIVE
20 EAST HANOVER AVENUE :
MORRIS PLAINS, N.J. 07950 : PENALTY ASSESSMENT
LOG #A8601327 NRA :

This ORDER and NOTICE are issued pursuant to the authority vested in the Commissioner of the New Jersey Department of Environmental Protection (the "Department") by N.J.S.A. 13:1D-1 et seq., and the Air Pollution Control Act, N.J.S.A. 26:2C-1 et seq. (the "Act"), and duly delegated to the Assistant Director for Enforcement of the Division of Environmental Quality pursuant to N.J.S.A. 13:1E-4.

FINDINGS

1. As the result of an investigation conducted on August 18, 1988, the Department has determined that at your facility located at 200 East Hanover Ave., Township of Hanover, Lot(s) 1, Block(s) 601, County of Morris, State of New Jersey, (ID #25136) you constructed, installed, or altered the following equipment without obtaining the required Permit(s) to Construct, Install or Alter Control Apparatus or Equipment, in violation of N.J.A.C. 7:27-8.3(a):

Vapor surface cleaner which uses Genosolve solvent.

ORDER

2. NOW, THEREFORE, IT IS HEREBY ORDERED THAT on or before September 29, 1988, you obtain the required Permit(s) for the equipment listed in Paragraph 1 above. If the required Permit(s) and Certificate(s) are not obtained by the above date, you must cease installation/operation of such equipment until the Permit(s) and Certificate(s) are obtained. Such Permit(s) and Certificate(s) may be obtained by submitting application(s) VEM-003 and VEM-004 to the Bureau of Air Pollution Control.

PENALTY

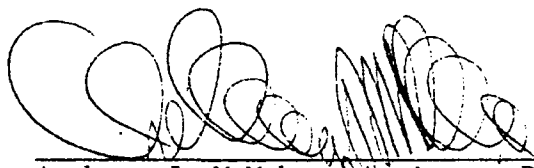
3. Based upon the above FINDINGS, and a review of the entire matter, the Department hereby assesses a Civil Administrative Penalty against you in the amount of \$200.00. Payment must be submitted to the Department within twenty (20) calendar days of receipt of this Order and Notice unless you request a hearing in accordance with the provisions of Paragraph 4 below. Payment must be made to the Department at the address listed in Paragraph E of Attachment I.

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CE-1

GENERAL PROVISIONS

4. Pursuant to N.J.S.A. 26:2C-14.1 you are entitled to a hearing if aggrieved by this Order and Notice. Application for such a hearing must be received by the Department within twenty (20) calendar days from receipt of this Order and Notice. In applying for such hearing, you must furnish the Department with the information listed in Paragraph A of Attachment I. If no request for a hearing is received within twenty (20) calendar days, this Notice shall become a final Order and the Penalty will then become due and payable. A hearing request does not stay the terms or effect of this Order.
5. The provisions of this Order and Notice shall be binding on you, your principals, agents, employees, successors, assigns, tenants and any trustee in bankruptcy or receiver appointed pursuant to a proceeding in law or equity.
6. No obligations imposed by this Order and Notice, with the exception of Paragraph 3, are intended to constitute a debt, damage claim, penalty or other civil action which should be limited or discharged in a bankruptcy proceeding. All obligations imposed by this Order shall constitute continuing regulatory obligations imposed pursuant to the police powers of the State of New Jersey, intended to protect the public health, safety and welfare.
7. NOTICE IS GIVEN, that pursuant to N.J.S.A. 26:2C-19(b) and N.J.S.A. 26:2C-19(d), any person who violates the provisions of the Act, or any code, rule regulation or order promulgated or issued pursuant thereto, or who fails to pay a civil administrative penalty in full, shall be liable to a penalty of not more than \$10,000 for the first offense, not more than \$25,000 for the second offense, and not more than \$50,000 for the third and each subsequent offense.

Dated: September 9, 1988



Anthony J. McMahon, Assistant Director
Environmental Enforcement

CERTIFIED MAIL

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